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PRECANCEROUS CONDITIONS*

WM. CARPENTER MacCARTY, M. D., Rochester, Minn.

The term precancerous has become so indelibly impressed upon our minds in our search for perfect therapeutic results in cancer, that it seems necessary to study its real meaning and significance in the light of facts which have been recently determined relative to the histogenesis or development of cancer.

It is a term which has not been completely defined nor accepted by many pathologists to have a definite histological basis other than the one, which the clinician has given to it considering chronic inflammatory conditions in general precancerous.

In this usage the prefix "pre" has had wide limits in regard to time; it has not been given a definition which means the immediate precancerous stage of cancer.

It is the writer's opinion from a certain knowledge of literature and some experience with clinicians that the term is more or less indefinite and needs some explanation, indeed, an explanation which will not only place the term upon a histological basis but will also indicate certain therapeutic measures which will be of value to physicians, surgeons and pathologists.

Since the question of cancer is a very large subject and not only includes many organs but embraces new-growth of both epithelial and connective tissue origin, it may be more clearly presented if we consider the question in regard to one organ and confine our observations to cancer which has its origin in epithelial cells.

More correctly speaking in this consideration the term precarcinomatous would be more appropriate. The term should also be

*Read before the Rock Island, Davenport and Moline Medical Society, April 9, 1914.

confined in this discussion to a condition which immediately preceeds cancer.

If one examines a large series of breasts which have been removed for chronic mastitis and for carcinoma, four definite histological facts will be seen.

1. Acini are found which consist of two rows of cells, an outer row and an inner row. (Fig. 1.).

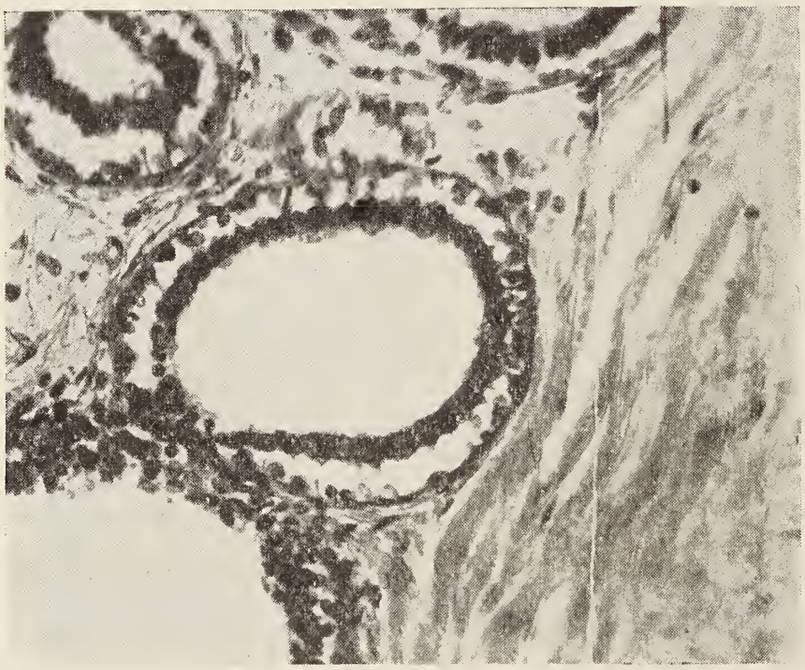


Fig. 1. 39909. Mammary acinus showing two rows of cells, the dark cells of the inner row are the differentiated or secretory cells. The pale cells of the outer row are the cells of the stratum germinativum. Primary epithelial hyperplasia.

2. Acini are found in which the inner row has disappeared and there is a proliferation of the cells of the outer row. (Fig. 2.).

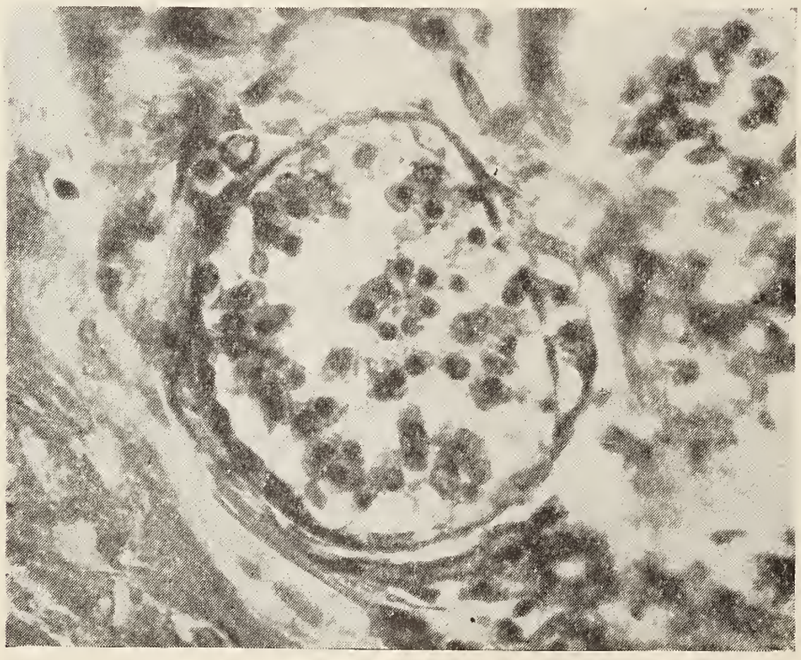


Fig. 2. 28376. Mammary acinus containing hyperplastic cells of the outer row (stratum germinativum). The cells of the inner row are absent. Secondary epithelial hyperplasia or pre-carcinomatous hyperplasia.

3. Acini are found in which the inner row of cells have disappeared, the cells of the outer row are hyperplastic and the line of demarcation between the acini and the stroma is confused and often partially destroyed.

The cells of the outer row are seen in the stroma. (Fig. 3.).

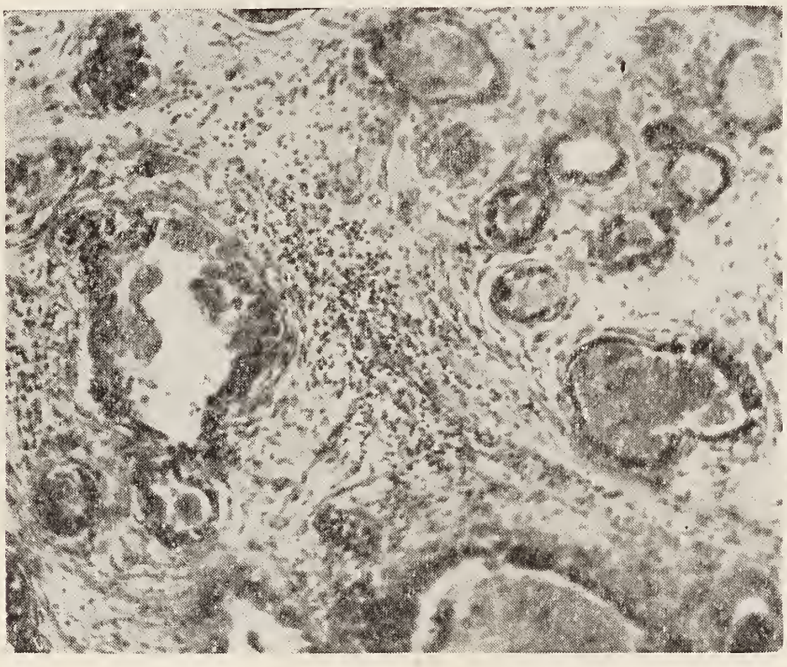


Fig. 3. 36116. Secondary or pre-carcinomatous epithelial hyperplasia in the mammary gland.

4. The cells within the acini are often morphologically indistinguishable from the epithelial cells in the stroma. (Fig. 2, 9 & 10).

Primary, Secondary and Tertiary Epithelial Hyperplasia.

PRIMARY, SECONDARY and TERTIARY EPITHELIAL HYPERPLASIA.

a

Primary epithelial hyperplasia (not carcinoma).

b

Secondary epithelial hyperplasia (carcinoma?).

c

Tertiary or migratory hyperplasia (carcinoma).

The first two of these conditions have been termed respectively, primary and secondary hyperplasia. The last two have been called tertiary or migratory epithelial hyperplasia. The first condition

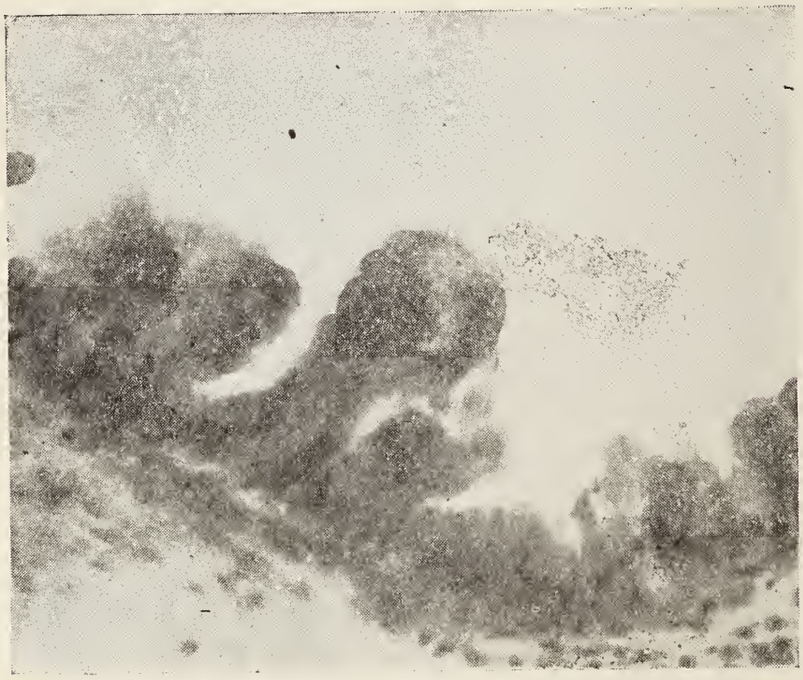


Fig 4. 20797. Secondary or pre-carcinomatous epithelial hyperplasia in the mammary gland.

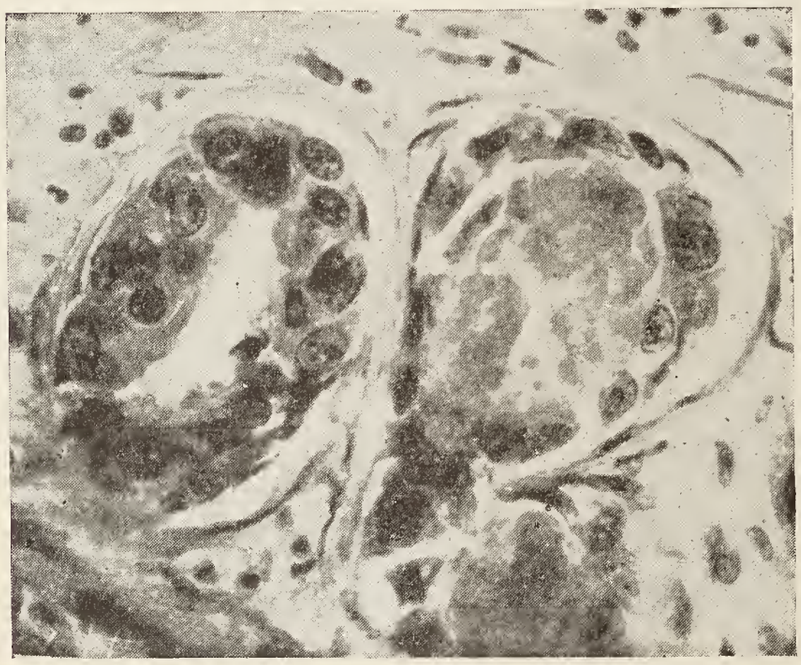


Fig. 5. 36116. Mammary acini containing epithelial cells which are indistinguishable morphologically from extraacinar cells of carcinoma.

(diagram a) is not carcinoma, the second (b) may or may not be carcinoma and the third (c) and fourth (Figs. 9 & 10) conditions are certainly carcinoma.

It seems to the writer that the most immediate precancerous or precarcinomatous condition is these pictures is the secondary epithelial hyperplasia. (Figs. 2, 3, 4, 5, 8, 9, 10). The condition is a definite histological picture and is one through which carcinoma passes before it can positively be said to be carcinoma.

The three histological conditions or apparent stages of epithelial hyperplasia which represent a benign condition (primary hyperplasia) and a malignant condition (tertiary or migratory hyper-

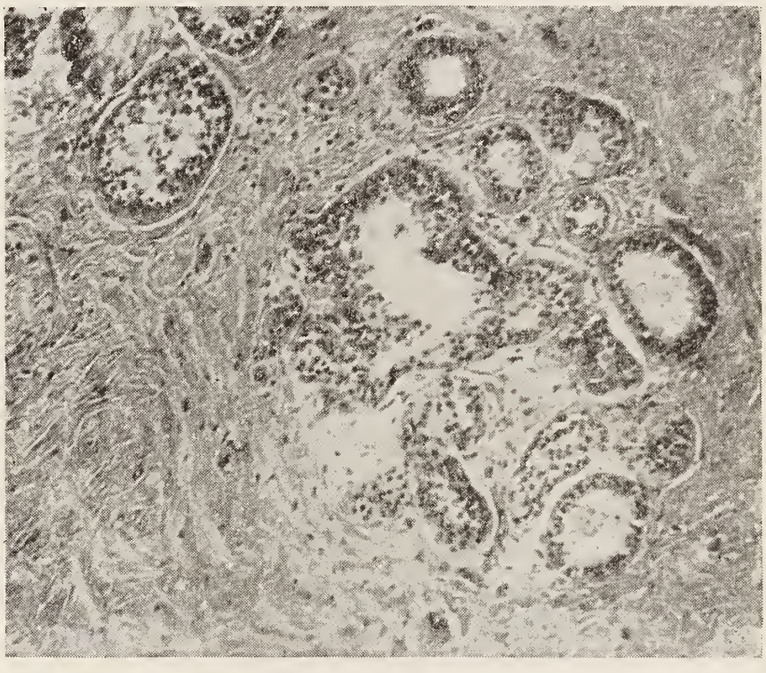


Fig. 6. 35256. Secondary epithelial hyperplasia showing the indefiniteness of the line of demarcation between the stroma and the acinus.

adenoma, simple fibro-adenoma and adeno-fibroma or fibro-adenoma and simple chronic mastitis with or without the presence of cysts. plasia) serve as a basis for definite practical rules for the treatment of mammary epithelial neoplasmata.

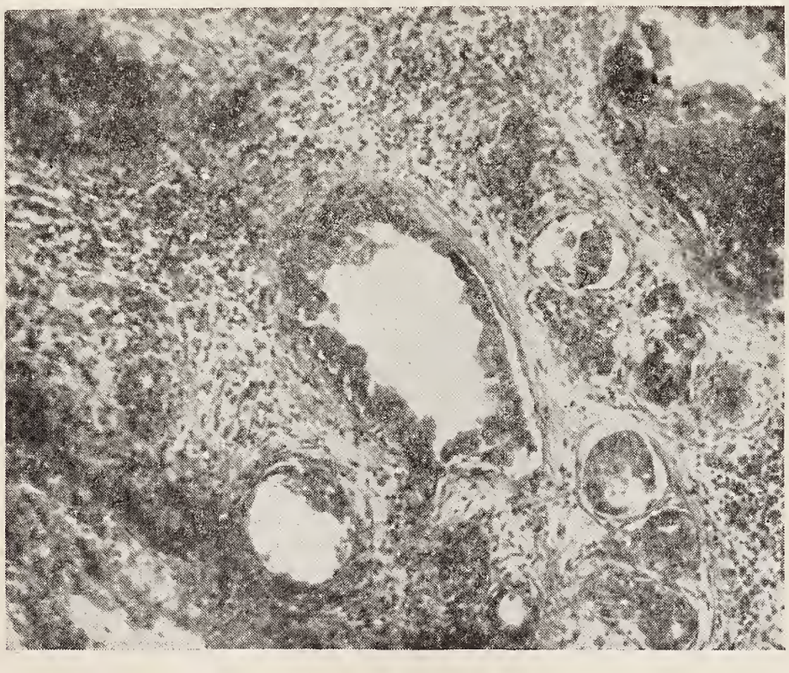
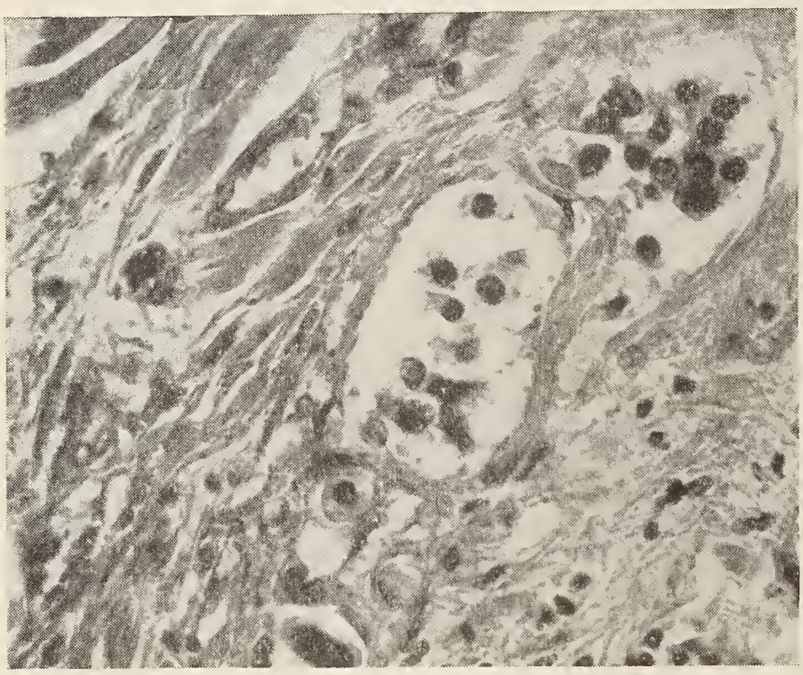


Fig. 7 and 8. 36116. Secondary epithelial hyperplasia showing the indefiniteness of the line of demarcation between the stroma and the acinus

They apply to any local or diffuse non-encapsulated or encapsulated tumor of the mammary with the exception of such rare conditions as sarcoma, endothelioma, myxoma, chondroma, dermoid,

teratoma, syphilis and tuberculosis and may even apply to these if the behavior of epithelial structures is to be considered as bearing upon the nature of the tumor.

They apply to the more common conditions such as simple In general, they apply to all tumors of the breast whose benig-



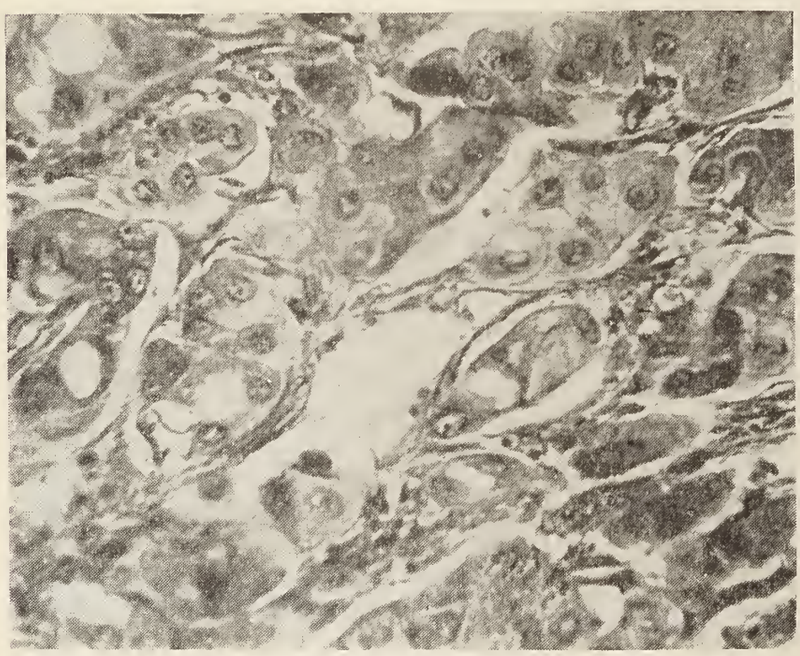


Fig. 9 and 10. 31983. Tertiary or Migratory Epithelial hyperplasia (Carcinoma) in a mammary gland.

nancy or malignancy is dependent upon the biological activities of epithelial elements.

This large group comprises the vast majority of pathologic con ditions in the breast with which the practitioner and surgeon come in contact and may be treated according to definite rules.

1. The conditions which are associated with classical clinical signs of carcinoma should be treated radically.

2. The doubtful cases in women near or over 35 years of age

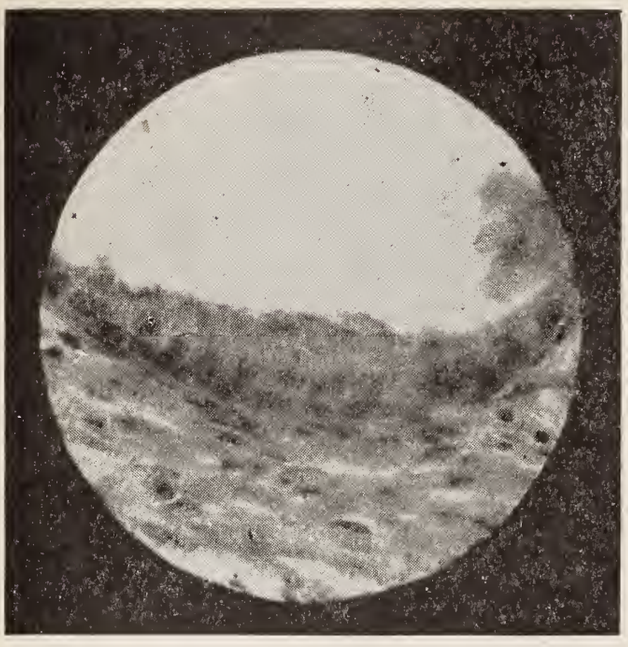


Fig. 11. 15835. Prostatic acinus showing two rows of cells, the cells of the inner row are the differentiated or secretory cells. The cells of the outer row are the cells of the stratum germinativum. Primary epithelial hyperplasia.

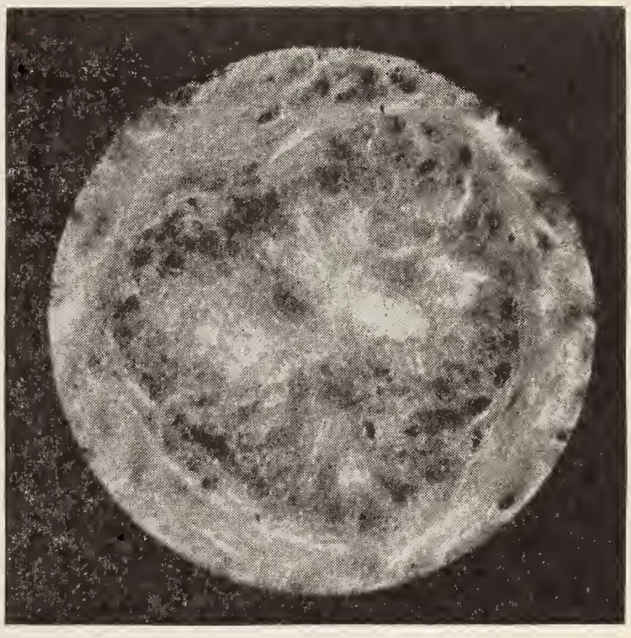


Fig. 12. 15835. Prostatic acinus. Secondary epithelial hyperplasia.

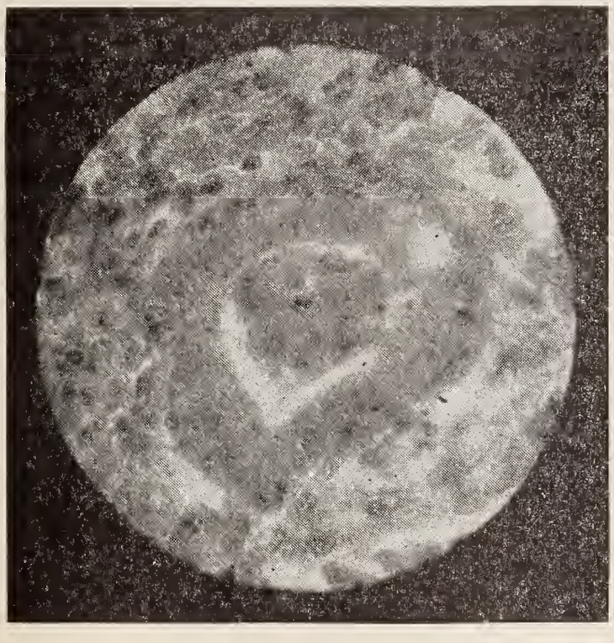
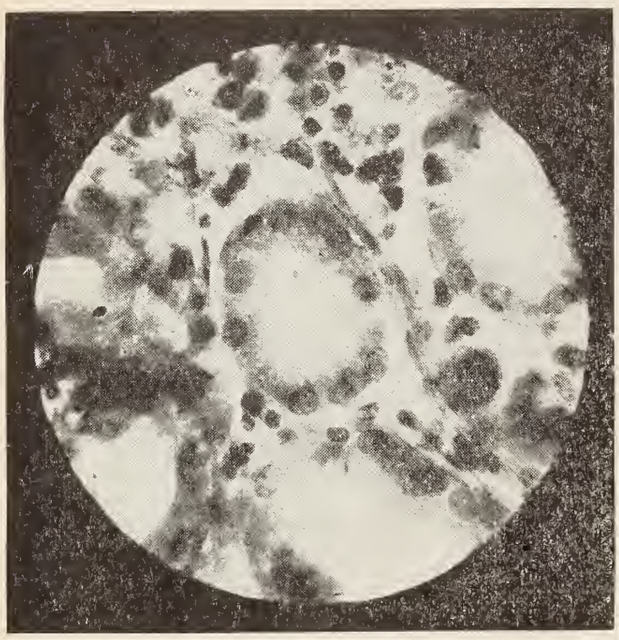


Fig. 13. 15835. Prostatic acinus. Secondary epithelial hyperplasia showing cells which are indistinguishable morphologically from carcinoma cells.

Fig. 14. 15835. Prostatic carcinoma (Tertiary or migratory epithelial hyperplasia).

should have the entire mammary gland removed for immediate examination. If primary or secondary hyperplasia be present nothing more should be done; if tertiary hyperplasia be present, a radical operation should be performed.

3. In doubtful patients near or under 35 years of age, a wide sector of the mammary gland including the pathological condition should be removed for examination. If secondary hyperplasia be



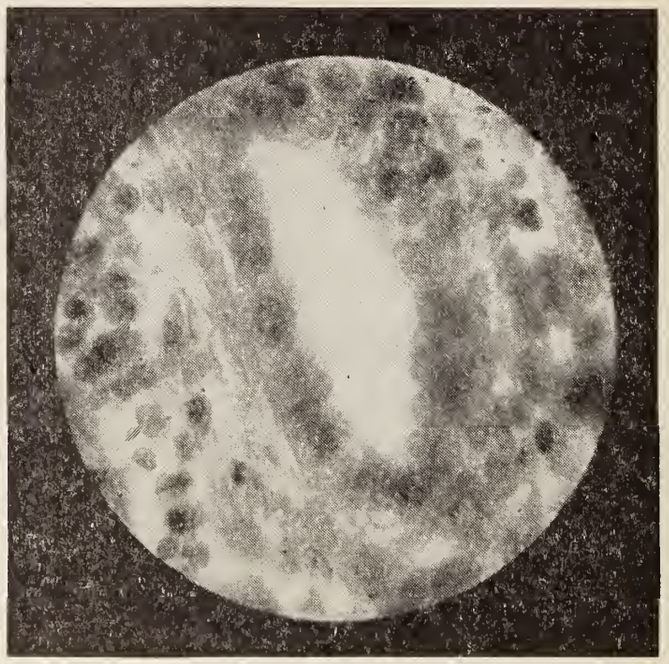


Fig. 15 and 16. 53630. Epithelium in the border of the mucosa of a simple gastric ulcer.

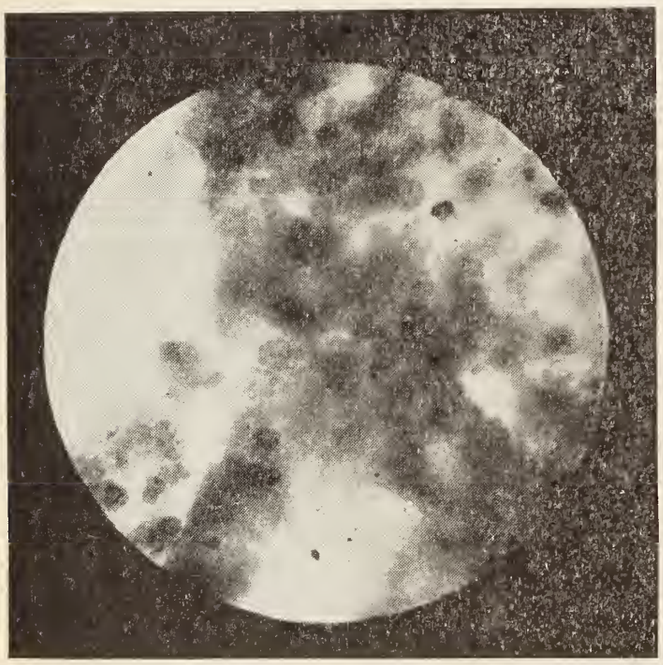


Fig. 17. 53630. Epithelial hyperplasia in the border of a simple gastric ulcer. Secondary epithelial hyperplasia?

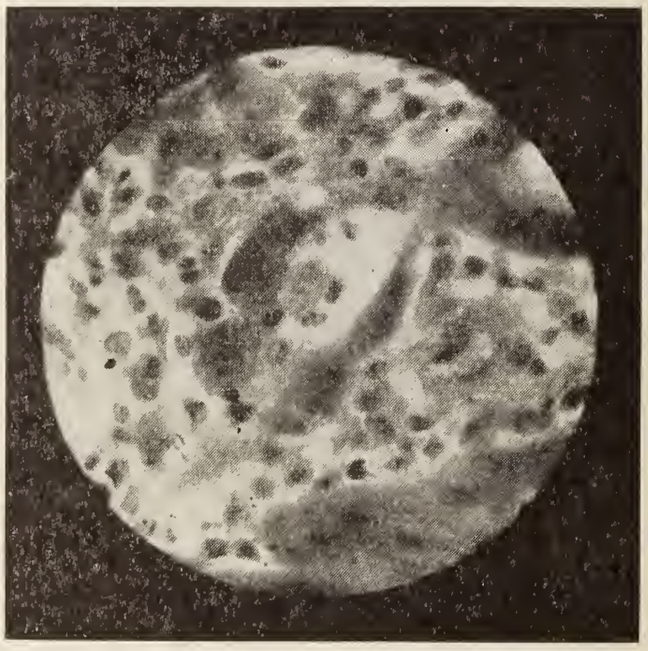
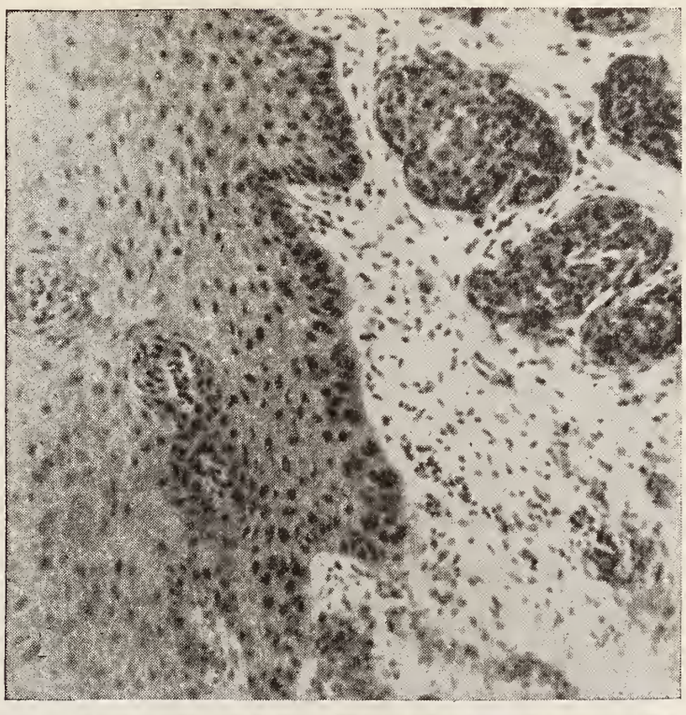


Fig. 18. 35572. Tertiary epithelial hyperplasia in the gastric mucosa.

present, the rest of the mammary gland should be removed and if tertiary hyperplasia be present, the radical operation should be accomplished.

It may be seen that in the case of one organ the precancerous or precarcinomatous condition may be defined as a definite histolog ical picture which allows, in fact, demands definite therapeutic precedures.

Since the precarcinomatous condition is a definite histological entity, and has clinical applicability in the breast, it behooves us to determine if similar histological entities exist in other organs.



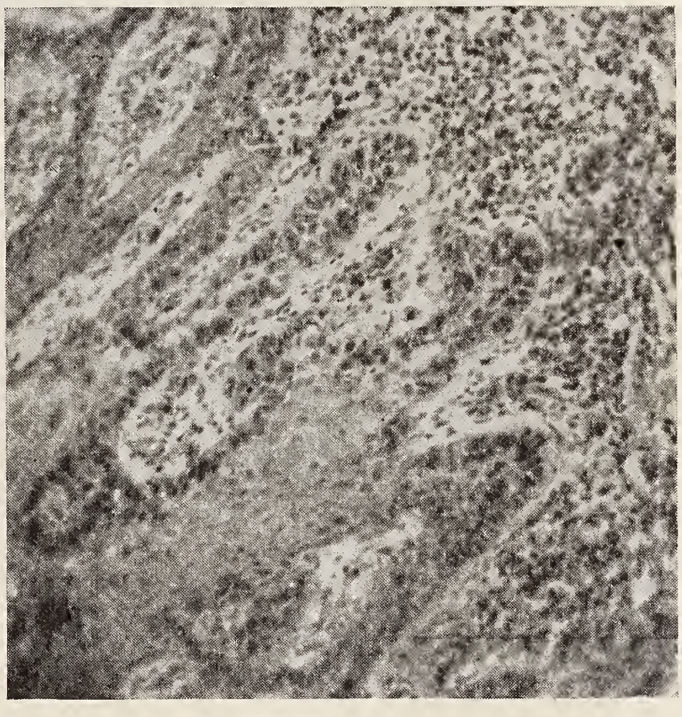


Fig. 19 and 20. A72606 and A 77538. Secondary epithelial hyperplasia in the stratum germinativum of the skin of a lip.

In the prostate gland there are three definite histologic pictures (Fig. 11, 12, 13, 14) which are identical with those which have been found in the breast. However, the anatomical character of this organ does not permit any advice from a therapeutic standpoint, although the presence of secondary hyperplasia should stimulate a guarded prognosis.

The natural pathologic grouping of gastric ulcerations allows somewhat the same consideration which has been advised for the mammary gland.

In the stomach one finds certain facts relating to chronic ulcerations and carcinoma which may be studied in the light of these findings.

Chronic gastric ulcers occur which have all the characteristics of simple chronic gastric ulcer plus the presence in the mucosa of an epithelial hyperplasia the cells of which are indistinguishable morphologically from the cells of early carcinoma. Similar ulcers occur plus the presence of invasion of the stroma by cells which are indistinguishable from the intra-glandular hyperplastic cells. This latter group is certainly carcinoma.

One also finds chronic gastric ulcers in which the borders and bases are definitely involved by carcinoma.

If operative precedure is to be carried out in the treatment of these cases it may be done according to definite rules. If excised chronic gastric ulcers show a mucosa which contains differentiated

Fig. 21. A96196. Secondary epithelial hyperplasia in the stratum germinativum of a hair follicle.

cells (Fig. 15) without the presence of partially differentiated cells (Fig. 16) one should not, with our present knowledge demand resection. If, however, there is an extensive hyperplasia of partially differentiated cells (Figs. 17 and 18) resection might be indicated when technically possible, if such a resection does not carry with it a greater risk to the patient than does simple wide excision. The clinical significance of what might be called the precancerous epithelial hyperplasia in chronic gastric ulcers may be, therefore, readily seen.

The fact that such a precancerous epithelial hyperplasia does occasionally exist in the mucosa of simple chronic gastric ulcers seems to indicate also at least one clinical consideration, namely, that it is impossible to determine by known clinical methods, by gross pathology or by low power microscopy when an ulcer is or is not in the condition of what might be termed secondary hyperplasia or precancerous epithelial hyperplasia.

There is one other organ, which has been studied by the writer in the light of histological proof of the histogenesis of carcinoma.

The skin, when in a condition of chronic inflammation, not infrequently shows cytological pictures (Figs. 19, 20) which bear certain resemblance to those which have been found in the breast.

This organ consists of two apparent types of cells, the differentiated or squamous cells and the socalled partially differentiated or basal cells. The latter cells have for their function the renewal of differentiated cells, when the latter have been destroyed and therefore show evidence of hyperplasia in the presence of chronic destructive processes.

They are not only hyperplastic but present marked irregularities in size and shape which are the same characteristics which are possessed by the intra-acinar hyperplastic cells of the outer row in the breast and which is called secondary or precarcinomatous epithelial hyperplasia.

As in the breast and stomach these cells are morphologically indistinguishable from the cells which have invaded the stroma in early epithelioma. This fact has a two-fold clinical significance. Since, we do not know that such a condition is or is not malignant one does not dare to do a radical operation. Since, we do know that it does bear a cytological if not a biological resemblance to epithelioma the clinician cannot deal with the condition justly, unless a wide excision is performed.

It seems to the writer that these observations allow the following definite conclusions.

1. There is a cytological basis for the term pre-carcinoma or pre-epithelioma and by further study this basis may apply more broadly to the term precancer.

2. The clinician may divide his therapeutic precedures into three types namely, simple excision, wide excision and radical operation with the removal of large amounts of tissue and lymphatic glands and that these may be based upon definite histological pictures of a condition which may be called precancerous hyperplasia.

3. The term precancerous may be limited to a cytological condition which immediately preceeds cancer and should not be utilized to indicate simply a chronic inflammation.

4. Even the cytological precancerous condition has not been definitely proven to always become cancer.

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THE MEDICAL ASPECTS OF SARCOMA*

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Since July 1st, 1910, there have been admitted to the medical service of the University Hospital, twelve cases of sarcoma among a total of 1391 cases. This shows that in a hospital medical clinic at least, sarcoma is a disease to be reckoned with, though of course when compared with carcinoma and especially with tuberculosis, less frequent. During this same period there were 47 cases of carcinoma, and 119 cases of tuberculosis, two of the main chronic capital conditions.

First let us refresh our memories as to what we mean by the term sarcoma. To quote Adami,[1] "First and foremost a sarcoma is a richly cellular tumor of the connective-tissue type, the cells being of the vegetative, imperfectly differentiated order, or "embryonic" and the component cells develop and present characteristically interstitial substance."

"The more embryonic the type of cell the greater the presumptive evidence of malignancy". Further "that as between two tumors of the same origin the more vegetative the type of cell and the greater the departure from the adult cell standard, the greater the malignancy".

Sarcomata "are not encapsulated but exhibit a peripheral growth and invasion of the surrounding tissues. This invasion is along the tissue spaces and leads to progressive destruction of the preexisting tissue with general absorption of all that tissue save a supporting frame-work around the vessels and capillaries".

One feature is the abundant vascularity of the growths and consequently hemoorrhages into the tumors are very apt to occur. Further "the sarcoma cells are liable to become free in the blood stream and metastases along the blood stream are characteristic of these growths." "Such metastases, it must be remembered are not confined to the blood vascular system; they may occur along the lymphatics, so that malignant enlargement of superficial and other lymph glands is not absolutely diagnostic of cancer". The latter is especially true of small, round-celled sarcomata of the lymphosarcomatous type. Adami, however, believes that "all sarcomatous growths of the abdomen may form such metastases". In our series only two cases showed any enlargement of the superficial glands.

Nevertheless, extension by the blood vessels is the commonest procedure, hence the frequency of metastases in the lungs.

The varieties of pure sarcoma are as you will remember: (1) small round-celled, (2) round-celled, (3) large round-celled, (4) oat-shape-celled, (5) small spindle-celled, (6) large spindle-celled, (7)

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giant-celled, and lastely (8) mixed-celled. The first mentioned is the most malignant of all.

In addition to these are the intermediate sarcomata "in which the undifferentiation has not proceeded so far so that some of the constituent cells attain a considerable degree of differentiation and tend to reproduce the tissue characteristics, whereas others are of the actively vegetative type. These are mixed celled sarcomas in another sense". In this way we recognize fibro-sarcoma, osteo-sarcoma, chondrosarcoma, etc. Time will not permit us to analyze the features of each variety in detail.

Yet I cannot overlook the osteo-sarcoma as it is a term frequently used in the body of this paper. This group shows usually mixed sarcoma elements—large and stumpy spindle cells, polygonal cells, giant cells. In general the greater the development of osseous matter the less the malignancy of the tumor. The most malignant are those which show least bone and most cells of the small type. Osteosarcoma, as pointed out by Buerger,[2] is not a proper term for all tumors arising in bone and should be applied only to that particular form in which the inherent potentiality to produce osseous ground substance or matrix is manifested.

Sarcoma, like its first cousin carcinoma, has its medical and its surgical features. By this I mean the predominating or presenting symptoms will determine the patient whether to consult an internist or a surgeon. The surgical are chiefly local—i. e. tumor, swelling, deformity, etc., and will be discussed by another speaker. The medical presenting symptoms are for the most part due to pressure of the primary growth upon the spinal cord or nerve trunks, or to extension of the process into the soft parts. The results of pressure of the tumor upon blood vessels occur less frequently but are well seen in the mediastinal sarcomata. Hence we can group for purposes of convenience, the main symptoms under three heads, (1) nervous, (2) visceral, (3) vascular.

The susceptible age is variable and the old teaching that sarcoma is a disease of youth and carcinoma of old age, is only to be accepted with reservation.

Too much must not be expected from the x-rays in diagnosis as in certain of the softer sarcomata, little or no shadow may be cast. In the majority of bone sarcomata some experience in the reading of skiagrams must be attained before they can be correctly interpreted.

I. Nervous Symptoms.

1. Pain is, needless to say, the most frequent as well as the earliest indication of a morbid growth, though its intensity varies from an almost inappreciable ache to the most exquisite, excruciating agony. This depends upon the number and nature of the nerve tissues involved, as well as upon the possibilties of expansion of the tumor. Thus a pelvic or thoracic osteosarcoma may reach enormous dimensions without marked pain, if it merely grows into the pelvis

or thorax without eroding the bony structures. On the other hand a sarcoma of a long bone not having the same room for growth, is associated with pain almost throughout the entire clinical course, or at least until it has broken through the periosteum.

2. Paralysis; owing to the liability to primary involvement of the vertebral columns, cord symptoms are by no means uncommon, as witnessed by our four cases. Depending upon the site of the growth and consequently upon the level of the cord at which pressure is exerted, the picture will vary.

If the upper cervical vertebrae be involved there will develop a pressure myelitis, which may be associated with a group of symptoms known as the Brown-Séquard syndrome.[8] That is owing to the fact that one side of the cord is more involved than the other there will be hyperesthesia and eventually spastic paralysis on one side while anesthesia chiefly to pain and temperature is most marked on the other side.

Case 1. Osteosarcoma of Cervical Vertebrae: Compression Myelitis: Brown-Sequard Syndrome: Operation for relief of pressure. Death. Autopsy. Large round-celled sarcoma.

C. S. Age 19. Clinical No. 82. Referred by Dr. McNeal of Lost Nation. Farmer. Admitted Oct. 27, 1910, complaining of pain, stiffness of legs and neck. For 20 years he had a lipoma on right forearm. In May 1909 another appeared in the sacral region. It grew rapidly and became bluish in color. It was removed, therefore, in Sept., 1909, and was reported by the surgeon to be an epithelioma. In Feb. 1910 he first noticed stiffness of neck, which gradually increased. In June 1910 he received injections over back of neck, since which patient had noticed induration of that region. Stiffness rapidly increased and the pain, which was slight, increased so as to interfere with sleep. On Oct. 20th, 1910 he noticed weakness of left arm and leg. He lost 35lbs. from May to October. Examination revealed flexion of the neck upon the chest with restriction of movement. Over the posterior aspect of the neck from the occiput to the 7th cervical, the skin was dark brown and boggy, with definite tenderness particularly on the left side. No cutaneous or glandular tumors apart from the lipoma above mentioned. There was a well defined paresis of the left arm and leg and slight of right arm. The biceps' reflex was absent on both sides, while the knee kick was more active on the left than the right side. No. Babinski. Pallesthesia was reduced to 25 per cent of normal on the left and 50 per cent on the right. Touch 50 per cent on the left and 90 per cent on the right. Pupils, eyegrounds, etc., negative. An x-ray plate showed a distinct shadow in the region of the 1st and 2nd cervical vertebrae. On Nov. 2nd the patient was given 3 mgms. of T. O., which was followed by a marked general reaction with temperature of 104.2-5 degrees, headache, etc. Finally there also appeared to be an increase of the signs. This was followed by an improvement in the pain, but not of the Brown-Sequard syndrome. On Nov. 7th an exploratory incision was made to drain what was thought to be a cold abscess from tuberculous caries of the neck. Nothing definite could be found, apparently from want of a more extensive dissection. The sensory symptoms, as well as the motor, progressed rapidly in the next few days, both being most marked on the left side, but the sensory disturbance was present also on the right. Eventually there was complete left-sided paralysis, almost complete of the right upper but slight

retention of power in the right lower. As the patient was evidently suffering from an increasing pressure over the cervical enlargement, a second operation was undertaken, and more extensive disection made, when a friable, hemorrnagic tumor of the bodies of the 1st, 2nd, and 3d cervical vertebrae was discovered. The patient stopped brething and death ensued while under the anesthetic. An autopsy was obtained which revealed in addition to the friable, boggy material above metnioned, an extradural mass, about the size of an egg, of pale yellow-white color, of soft and friable consistency. The spinous processes of the 1st and 2nd cervical vertebrae had been destroyed. The posterior portion of the atlas had entirely disappeared. The posterior of the axis on the right side was present but eroded by the tumor process. On opening the dura it was found that the tumor had extended through on the left side and was distinctly pressing on the spinal cord. Microscopically the tumor was found to be a large round-celled sarcoma. There was slight degeneration of the descending tracts below the points of compression.

Again the growth may exert equal pressure on the two anterior halves of the cord and a picture of compression myelitis will result. Thus in addition to the nerve root pains, motor cord symptoms will result. If the cervical cord be involved there may be spasm of the cervical muscles, the head will be fixed, and motion will either be prohibited or associated with great pain.[4]

Case II. Osteosarcoma of Cervical Vertebrae; Compression Myelitis; Paraplega with Spastic Paralysis. Death. No Autopsy.

B. K. Age 43. Clinical No. 1007. Housewife. Referred by Dr. Schultz, of Garner. Admitted July 8, 1913, on account of numbness and weakness of extremities. In Feb. 1911 she first noticed stiffness of neck which gradually became more and more painful, particularly when she received a jar. In Aug. 1911, the pain first radiated into the shoulder. It was not until April 1913, that she noticed numbness and weakness of the right hand. About June 1913, similar symptoms developed in the middle, and ring fingers of the left hand, and two weeks later in the right leg. On examination there was distinct rigidity of the neck with the chin held pointed to the left. There was definite spasm of the neck muscles and prominence of the lower cervical and upper dorsal vertebrae. No local tenderness, but jarring the head caused pain in the neck radiating to the shoulder. Glands no where palpable. All the tendon reflexes were increased and there was slight patella and ankle clonus on the right, with bilateral Babinski, though more marked on the right. Sensation to touch, pain, and temperature and pallesthesia intact throughout.

There was no reaction to subcutaneous tuberculin. Very slight anemia. A negative Wassermann, in both blood and spinal fluid. The spinal fluid was also negative as to cell count and protein content. The skiagram showed a distinct osteoporosis in the bodies of the III and IV cervical vertebrae due to the tumor invasion, with tilting of the transverse processes. After discharge she developed first incontinence of the bladder and rectum and then a spastic paralysis of the right arm and leg, then of the left leg and arm. She died January 15th, 1914. No autopsy.

In the thoracic region the spinal deformity will be more marked and pressure symptoms are still more common. This type is most frequently seen as a result of Pott's disease and was not illustrated in our sarcoma series. On the other hand we have seen several cases recently in which resulting compression myelitis was due to metast-

ases from carcinoma of the breast and one from the prostate. The paraplegia slowly develops— first weakness and paresthesia, girdle sensation intercostal neuralgia and then a rapid loss of muscular power with spasticity and increased reflexes. Sensation is lost more slowly.

In the lower dorsal or lumbar regions the symptoms are practically the same but the sphincters are involved and the reflexes are not exaggerated.

Case III. Osteosarcoma of Lumbar and Sacral Vertebrae: Compression myelitis: Paraplegia with flaccid paralysis. Death. No autopsy.

T. F. Age 56. Clinical No. 985. Housewife. Referred by Dr. S. S. Westley of Manly: Admitted June 15th, 1913, on account of pain in the sacrum, inability to walk, and numbness in lower extremities. Four years before she had noticed numbness and tingling in both legs but particularly the left. There was also pain in the sacral region, radiating around to the front of the abdomen. For nine months she had difficulty in walking alone. There was also retention of urine and marked constipation with loss of twenty pounds in weight. Examination revealed a uniform elevation in the sacral region, more marked to the right of the mid-line. The surface was regular and not tender. There was complete paraplegia without spacticity, slight atrophy of the muscles, loss of K.K. and Achilles' reflex on both sides. No Babinski. There was an area of anesthesia to touch, pain, and temperature over the buttock and slight impairment of touch over the inner side of the left thigh and leg. There was no anemia. The spinal fluid showed no increase in the cells but a marked increase in the protein content. The Wassermann was negative. After discharge from the hospital, the paralysis increased particularly on the left. Obstinate constipation also developed before her death on December 15th, 1913. No autopsy obtained.

If the tumor be situated still lower, the branches of the cauda equina may be involved when again neither spasticity, increased reflexes etc., will be present but merely anesthesia of varying degrees and extent. The symptoms are of gradual onset and often affect the motor, sensory, or sphincter functions separately. Further it is of the peripheral type i. e. follows nerve distribution and not the cord segment.

The sphincter symptoms are slight impairment of bladder control and constipation, if the lesion is unilateral: or complete loss of both vesical and anal reflexes as well as loss of the powers of erection if the lesion be bilateral.

Case IV. Osteosarcoma of Sacral Vertebrae Compression of Cauda Equina; still under observation.

J. S. Clinical No. 578. Age 23. Carpenter; Referred by Dr. C. S. Kraus, Cedar Rapids: Admitted May 14, 1912, on account of pain in lower back and difficulty with walking. In Jan. 1912, he first noticed sharp pain in the lower dorsal region which rapidly increased in intensity. He next noticed incontinence of urine and he was referred in April 1912 with a clinical diagnosis of spinal syphilis. Apart from the evidence of this disease in the skin and in the blood, there was noted a mass over the lower sacral region which could be felt per rectum. It was firm and evidently attached to the sacrum, was irregular and somewhat indurated.

In addition, an area of anesthesia to touch and pain was present over the lower sacrum, coccyx and inner side of the right thigh. Reflexes were normal. There was slight secondary anemia, with a normal leukocyte count but with the presence of marrow cells, (myelocytes and myeloblasts) in the differential count. At the present time, the patient is still under observation and the tumor occupies the entire pelvis and has almost obliterated the lumen of the rectum, which it has pushed down before it. It can be felt above the symphysis, extending to either iliac fossa. The prominence over the sacrum has about quadrupled in size since he first came under observation. Apart from loss of weight and discomfort induced by the obstipation, the patient remains in fair health. The skiagram revealed at first a dense shadow in the bodies of the lower sacral vertebrae. A recent one shows a diffuse shadow filling the entire pelvis.

II. Visceral Symptoms.

Under this we would include the joint cases as well as the pleural, pulmonary, mediastinal and intestinal. In these while pain may be a more or less prominent feature it is not the striking one but only incidental to the disability of function of a joint or in association with cough, dyspnea, constipation, etc.

When sarcomata develop in the ends of the long bones, joint symptoms naturally are prominent. Pain, swelling, and disability of the joint cause the patient to consult his physician for rheumatism—that "coat of many colors", under which too many practitioners are only too willing to take shelter.

Case V. Sarcoma of Fascia of Flexor Ulnaris; simulating arthritis of wrist-joint: Amputation of arm: Recovery: Round-celled sarcoma.

F. G. Age 60. Clinical No. 599. Schoolmistress. Referred by Dr. Van Epps. Admitted June 7th, 1912, on account of a slight lump on the right wrist. Two years previously she had suffered occasional pain on the inner side of the right wrist but not until six months before had she noticed a small nodule at this site.. This gradually increased in size and the pain became more intense. Examination revealed an almond-sized mass on the ulner side of the right wrist. This mass was moderately tender but freely moveable. Examination was otherwise negative. After a negative tuberculin test she was transferred to the surgical side and the right hand was amputated at the middle of the forearm. The histological report was round-celled sarcoma. One year later there was no evidence of recurrence.

A sarcoma of the structures forming the hip joint may give rise to a classical picture of tuberculosis of the hip. The following case was shown by me to my clinic as an undoubted case of advanced tuberculous morbus coxae with abscess formation, which had supposedly burrowed forward into Scarpa's triangle.

Case VI. Osteosarcoma of femur, simulating Tuberculous Morbus Coxae: Exploratory incision: Still alive.

L. S. Age 15. Clinical No. 953. School girl. Referred by Dr. Bowen of Andrew. Admitted May 19, 1913, on account of lameness and pain in the left knee joint. In Feb. 1913, she fell on the ice and injured her left hip which caused her to limp for a couple of days. This cleared up until six weeks before admission, when she again noticed lameness of the left leg and fullness in the left groin. Four weeks later, pain devel-

oped in the left knee, sharp and knife-like at first, subsequently dull and more or less constant. She had lost nine pounds in the past three weeks. Examination revealed a slender, delicate looking girl, of somewhat phthisical facies. The left leg was held flexed at the hip joint. When extended, there was marked arching of the lumbar spine. There was marked spasm of the muscles around the hip joint and tilting of the pelvis. There was atrophy of the muscles of the thigh, but no apparent shortening of the leg. Vaginal examination revealed a mass in the region of the acetabulum and there was marked fullness in Scarpa's triangle just beneath Poupart's ligament.

A skiagram revealed a normal neck with the head of the former in the joint-cavity but there was a bulging of the acetabulum into the pelvis and a shadow thought to be the distended capsule. The von Pirquet test was slightly positive. Under general anesthesia an incision was made over the front of the joint where a large hematoma and broken down friable tissue evidently of a sarcomatous nature were found. No histological examination was made.

Another case with the growth in the lower end of the femur caused us much trouble for several days to exclude traumatic, gonorrheal, or tuberculous arthritis. It was not until our attention was called to the skiagram by Dr. Jepson that the true diagnosis dawned upon us.

Case VII. Periosteal Sarcoma of Condyle of Femur, simulating traumatic synovitis: Amputation of leg: Recovery. Giant celled sarcoma.

J. K. Age 23. Clinical No. 580. Farmer. Referred by Dr. Carlson of Thornton: Admitted May 16, 1912, an account of pain and swelling of the left knee which had been present since July 1911. It had been red, swollen and tender. Three days before he received a kick by a young colt which caused him to suddenly jump on his left leg, since which the pain has been more marked. Examination revealed the left leg held firmly flexed at the knee. The knee joint itself was enlarged particularly above and on the inner border of the patella where there was distinct fluctuation. The urethral smears were negative for gonococci. The tuberculin test was tried repeatedly with as much as 10 mgms. of T. O. without local or systemic response. A skiagram revealed a diffuse shadow with considerable osteoporosis of the inner condyle of the femur. The case was transferred and the leg amputated above the knee. The histological diagnosis was giant-celled periosteal sarcoma.

So far we have been discussing sarcomata of the vertebrae and the ends of the long bones. The ribs, however, may be affected and give rise to a very puzzling group of symptoms as is well illustrated by case VIII. While Dr. Jepson at once suggested the probable origin from a rib, we were very loathe to give up the possibility that the neoplasm was primary in lung or pleura. Our reasons for this can best be understood by considering the case report.

Case VIII. Periosteal Sarcoma of Rib: Extension to Left Lung: Death: Autopsy: Giant-celled periosteal sarcoma.

I. W. Age 24. Clinical No. 833. Housewife. Referred by Dr. Ayres, Sabula: Admitted Feb. 6th, 1913, on account of a tumor of the left breast and shortness of breath. In August 1912 cough and a pleuritic pain in the left side developed. At the same time she noticed a small nodule on the rib just external to the left breast which gradually grew

larger until the entire left breast was hard and indurated. Shortness of breath developed on Feb. 5th, and the home physician lanced the tumor and evacuated some redish material. Examination revealed a large firm mass occupying the outer and upper quadrant of the left breast extending backwards to the posterior axillary fold. It was firm and adherent and not tender. There was absence of movement of the left chest, flatness to percussion and absence of breath sounds, as well as marked dislocation of the heart to the right. Aspiration of the left chest revealed a few ccs. of bloody fluid. A skiagram showed no definite abnormality apart from dislocation of heart, and the diffuse shadow in the left thorax. The patient gradually failed and died April 9, 1913. Autopsy revealed a primary periosteal sarcoma of the 4th rib which had extended outward between the rib above and the rib below to form the large external mass. The left lung was completely replaced by a necrotic tumor tissue so that it could be scooped out with the hand. There was one small nodule in the mesial surface of the right lung. Microscopically there were areas of loosely packed round cells with mitotic figures and in the primary growth was a network of fine bony trabeculae showing mature bone and bone in the process of formation.

Lund[5] points out that a primary sarcoma of the rib is more apt to develop on the sixth, seventh, or eighth. It spreads over the rib on either side and usually involve the rib above and below. The tumor does not ordinarily attack the skin or muscles. At first the tumor expands outside the chest and extends by direct growth along the intercostal spaces towards the sternal and vertebral ends of the ribs. Eventually it grows inward between the intercostal spaces. The adjacent pleura is first thickened and finally invaded. The visceral pleura is rarely involved because the tumor does not become adherent and extend over the lung. In rare cases however, adhesion of the visceral pleura and invasion of the lung do take place. This was certainly what occurred in our case. Invasion of the pericardium is also rare but extensions to the diaphragm are more common.

Sarcoma of the periosteum (gums) or the medulla of the maxillary bones is by no means rare. It may be of the spindle-celled, round-celled or giant-celled variety: the latter is the more frequent. They occur oftenest in the fifth decade, "and arise oftener from the posterior surface of the gum in connection usually with the teeth of the upper jaw." The myeloid variety is soft and often ulcerates. In addition to the sarcomatous epulides, the growth may originate in the antrum[6], the walls of which it expands in its growth and thence project into the nose, mouth, pharynx or even into the cranial cavity.

Case IX. Sarcoma of Superior Maxilla: Metastases to Cervical Lymph Glands: Tissue removed for diagnosis revealed spindle-celled sarcoma. Death. No autopsy.

J. L. Age 53. Clinical No. 930. Stone mason. Referred by Dr. E. H. Knittles, Waterloo. Admitted May 6, 1913, on account of swelling on jaw and neck. In Oct. 1912 first noticed looseness of a molar tooth in right upper jaw and by degrees all the others became loose and were

extracted. In March 1913 he first discovered enlargement of glands behind and below the right ear. The latter gradually increased and extended to the other glands of the neck. Examination revealed on the right side a mass anterior to the angle and another posterior to angle of jaw. These were large and firmly attached, with smooth surface and not evidently tender. On the left was a smaller single mass of the same characteristics. Along the alveolar process of the right upper maxilla was a roughened, irregular, granulating area, very friable and bleeding easily on slight touch. Some of the glands eventually became infected and were drained. An x-ray plate showed clear sinuses. A portion removed for diagnosis was reported to be a spindle-celled sarcoma. The patient was discharge, unimproved. Patient died Aug. 15, 1913. No autopsy.

Sarcoma of the intestinal tract is by no means common as compared with carcinoma. It is usually of the round-celled type, but may be spindle-celled, alveolar and melanotic. Yet that such can occur is illustrated by the following.

Case X. Sarcoma of Ascending Colon: Metastases to Omentum. Exploratory laporotomy: histological diagnosis of sarcoma.

F. W. Age 47. Clinical No. 8. Painter. Referred by Dr. C. P. Smith, Mason City. Admitted July 19, 1910, on account of a tumor in the right abdomen. He first had pain in the right abdomen in April 1910. Then indigestion. He had constipation for years. The tumor was noticeable in June 1910. There was forty pounds loss in weight. Examination revealed a large mass in the right middle quadrant, the note over which became tympanitic upon inflation of the colon with air. The mass was freely moveable but not definitely affected by respiration. A small nodule could be felt immediately above the main mass. A diagnosis of retroperitoneal tumor, possibly of hypernephroma, was made. A laparotomy performed July 26, revealed a large tumor of the ascending colon. A nodule in the omentum, the size of a wallnut was removed for microscopical examination. The histological report was sarcoma, the type of which was not mentioned. Patient left hospital August 10th unimproved and has since been lost sight of by his physician.

III. Vascular Symptoms.

Engorgement of the superficial veins is the commonest of the pressure effects of sarcomata and nowhere is better seen than in mediastinal cases. Edema may also supervene as was present in our only case which illustrates this group of symptoms.

Case XI. Mediastinal Tumor: Sarcoma? Patient lost sight of.

F. L. Retired farmer. Age 58. Clinical No. 1070. Referred by Dr. Scarborough. Admitted Aug. 31, 1913, on account of pain in the left arm and shoulder. In April 1912, he first noticed pain in the chest and arms. There was some cough. In July 1913 he had an attack of so-called pneumonia, which laid him up in bed one week, though the fever never ranged above 100°. During August he began to suffer from dyspnoea, pain in the left shoulder and arm and puffiness of the backs of hands and elbows. He had lost only nine pounds since winter. He was admitted to Oakdale on Aug. 27, 1913, and tuberculosis being excluded, thence transferred to the University Hospital. Examination revealed a tall, slender man with husky voice and some cyanosis of face, neck and entire chest to the costal border. No inequality of pupils. In both of the anterior triangles of the neck, but particularly in the right, there were

smooth, enlarged glands. Over the chest there were numerous distended veins. The expansion was poor with slight lagging on the left. The size and position of the heart as well as the sounds, were normal. The radial pulses equal, and synchronous. The backs of both hands were puffy and the veins prominent throughout both arms. There was also edema of the forearms. A distinct polycythemia; (Hb. 85%; R. B. C. 6,560,000, and a leukocytosis, W. B. C. 16,000, in which P. N.=81%; Ly.=14%; Tr.=1%; E.=2%; Mz.=2%:) were present. A skiagram revealed a dense shadow at the level of the second, third, and fourth ribs, from evident mediastinal tumor. The exact nature of this was never proven but aneurysm could be excluded from the absence of expansile pulsation etc.

Christian[7] states that of all tumors of the mediastinum, sarcoma is of the most frequent occurrence. They originate in the loose connective tissue of the medaistinum, in the peribronchial, and mediastinal lymph nodes and in the thymus. They are either spindle-celled or lympho-sarcomatous in type; most commonly the latter.

The most common and most troublesome symptom is dyspnoea. Pain is frequent in the late stages. Cough is generally present, in part the result of vagus irritation and in part the result of bronchitis due to pressure upon the bronchi. Dysphagia, hoarseness and even aphonia may occur. There may be a visible prominence of the upper anterior throax.

In addition to the dilated veins and localized subcutaneous edema, the other physical signs are cyanosis, dullness over a varying area, deviation of the trachea from the mid-line, a tracheal tug, laryngeal paralysis, dilation of the pupil and radiographically a dense shadow in the mediastinal region.

Occasionally as we have said a sarcoma becomes generalized in a similar manner to carcinoma. The following case well illustrates such a generalization. It was no doubt largely by the blood stream.

Case XII. Multiple Sarcomata of Skin, Lungs, Mediastinal Glands, Spleen, Liver, Kidneys, Pancreas and Sacrolumbar Vertebrae: Death. Autopsy: Large round-celled sarcoma.

F. S. Age 31. Clinical No. 150. Farmer. Referred by Dr. Cooling, Wilton. Admitted Jan. 28, 1911, on account of pain in left hip and thigh. Three years before he had a growth removed from above the left eye which recurred twice after removal. On Dec. 1st, 1910, he began to have pain in the left hip-joint, which gradually increased and required morphia. About Jan. 14, began to suffer from a soreness in left half of scalp. Examination revealed a number of subcutaneous tumors scattered over the trunk varying in size from 4 to 16 mm. These were freely moveable and not tender. There was on deep pressure in the left inguinal region, a definite tumor, but the movement of the hip joint was free in all directions. Rectal examination revealed tenderness on deep pressure on the left, but no palpable mass. Skiagrams of the pelvis, hips, and lumbar spine showed no abnormalities. One of the subcutaneous tumors was removed for histological examination. It was reported to be a large round-celled, sarcoma, primary, in all probability, in the skin. The patient gradually sank and died February 17, 1911. An autopsy was obtained which revealed nodules in both lungs, mediastinal glands, spleen, liver, kidneys, and pancreas. In addition, in the left iliac region,

ascending from the 4th lumbar vertebra to the uppper end of the sacrum, was a tumor measuring 7x11 cms. On the vertex of the skull were two large, and several small tumors, the larger of which had invaded the dura but not apparently the brain underlying it. Microscopic examination of all the specimens revealed the same picture of a large round-celled sarcoma.

These case reports go to show that sarcoma may appear in many guises and is a condition to be reckoned with by the general practitioner and internist as well as the surgeon.

Just a word in closing; a diagonis of a primary bone tumor, particularly in a patient over thirty, should never be made without a very careful examination of the abdomen, mammae, thyroid and prostatic glands. Carcinomata of these organs are especially liable to metastasize to bones and there produce symptoms which may overshadow those of the primary growth.[8]

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CARIES AND NECROSIS OF THE MAXILLAE*

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Over 75 per cent of all diseases of the maxillary bones that I have been called upon to treat might properly be called caries, and have their origin in some infected root canal or otherwise diseased teeth.

I am more firmly convinced that true necrosis of the maxillae seldom, if ever, results from alveolar abscesses or similar infections, that when it does occur it is the result of some serious systemic disturbances, such as lues, mercury, arsenic, or phosphorus poisoning, etc., and sometimes from extremely severe traumatisms; but only in such instances as where the bones are comminuted and afterwards become infected. Or again, where pressure is brought upon the hard parts in such a manner that the blood supply and nutrition is disturbed.

If infection does not take place, and the parts are not disturbed by mechanical appliances, the most severe traumatisms will heal rapidly even when the bones are splintered, providing the patient has

*Read before the Polk County Medical Society.

fair resistance. In cases of fracture of the lower jaw, if the parts are not fixed a fibrous union may result, but seldom necrosis.

As it is not my intention, at this time, to discuss the above mentioned conditions, we will not dwell upon this phase of the subject.

The cases that I shall show are mostly of true caries of the bone, and present to the examiner, a varied and peculiar train of symptoms.

These carious areas in the bone are often difficult to locate, and may be easily overlooked by competent surgeons even while making a special examination for such conditions, for they do not always present a discharging sinus or other visible signs of disease.

Etiology. The exciting cause will usually be found in the infectious discharge from a previously formed abscess at the apex of a devitalized root, although it sometimes occurs from other causes, such as unerupted teeth, foreign bodies that become infected, etc.

The infectious agent is usually one of low virulence, and of a mixed variety, commonly of the staphylococcus group, also a certain spiral is invariably found, spirals similar to those described by Vincent in his description of angina. Personally, I do not place much pathological significance upon the presence of these spirals, as they are found in most all infections of the oral cavity. The character of the infectious bacteria account for the comparatively chronic course of the ordinary alveolar abscess. Occasionally, however, we see an infection of an entirely different character, it lights up rapidy, runs a very acute course, produces much inflammation, a diffuse swelling, high temperature, and a very prostrate condition of the patient. It is almost impossible to check the progress of this latter infection, which usually proves to be streptococcic in orgin. Incisions fail to disclose any localized collections of pus. However, deep incisions and perfect drainage with the closest attention to the general condition of the patient are necessary requisites.

Improper drainage together with low tissue vitality soon convert these acute abscesses into the chronic conditions of which I wish to speak more fully.

When a discharging sinus opening into the oral cavity or upon the face fails to heal after proper treatment by a competent dentist, it is evident that the infection has not only extended beyond the apex of the root but has devitalized the tissue around one or more of the teeth.

The root itself may have become effected, although this never occurs until long after the alveolar process has become softened and destroyed.

This affected area of the bone is not a hollow cavity nor does it feel "hard and roughened" nor have the "dead bone" feeling so much talked about, but on the contrary, it is invariably filled with a soft inflammatory tissue, nature's method of trying to care for this destruction of the bone. It is distinctly a carious condition of the

bone, a molecular death of tissue due to the irritating, devitalizing action of pus and bacteria.

The amount of tissue destroyed depends upón four factors: namely,—

First:—the length of time the active agent has been at work.

Second:—the strength or virulency of the infectious material or bacteria.

Third:—the resistance of the tissue, the physical condition of the patient.

Fourth:—the promptness with which the surgeon establishes drainage.

This is often delayed so long that considerable destruction of process around the apex of the root has taken place.

Symptomatology. The symptoms may vary from a very slight fullness, in the part affected, to the most nerve racking pain, also reflex pains in the eye, ear, face and temporal region. There is usually, but not always tenderness of the offending tooth, if it be struck a light, quick blow with a small steel instrument.

Pressure over a diseased area will not always elicit pain, but will sometimes cause pain in the ear, infraorbital, or some other remote region.

There may be enough toxins absorbed from a carious area to produce trismus and even rigidity of the muscles of the neck. Occasionally the pain takes all the characteristics of tri-facial neuralgia, and it may really produce this condition. The usual symptoms are dull ache over or near the site of the disease, tenderness of diseased tooth upon percussion, and slight tenderness over the areas upon deep pressure. The pain is worse while the patient is quiet or lying down.

Diagnosis. This is by no means as simple as it appears at first thought. There is not always a discharging sinus, and often when it is present it is not readily discovered. The sinus often heals for weeks, and even for months there is no external discharge, the exudate being absorbed, then when the vital forces are again lowered, and the infection overpowers the resistance of the tissues the sinus will swell and open again.

There is seldom an abnormal temperature or pulse, unless in an acute stage or exacerbation. Extensive destruction of the bone will sometimes take place without producing enough pain or discomfort to cause the patient to seek medical advice.

The x-ray is of inestimable value, and will often show clearly the foci of caries when all other methods fail. The injection of bismuth subnitrate into the sinus will assist in locating the seat of the disease when the conditions lead one to suspect that the principal area of caries is not near the opening of the sinus. While the radiograph is indispensable there is a possibility of a carious area being so hidden by a dense plate of bone or roots of teeth, or the angle at

which the rays enter may be such that it will fail to cast a shadow upon the negative. Notwithstanding these possibilities the x-ray is the most reliable means we have of arriving at an accurate diagnosis.

Prognosis. The prognosis is favorable if cared for before it extends to the antrum of highmore or other sinuses. Deformity is rare if the operation is performed through the mouth and the wound is kept packed until granulation tissue fills in the cavity.

New bone does not form as much as might be expected but it fills up nearly full, and cartilage will ultimately take the place of the granulation tissue. The mucus membrane should not be allowed to heal over too soon; for as soon as the mucus membrane entirely covers the wound, it will cease to fill.

Treatment. We will all concede that it is impracticable if not impossible to treat and drain such a diseased area of bone through the root canal of the tooth. The injections of pastes and other treatment through the sinus has not proven satisfactory in my experience.

Obviously, the most rational method is an incision through the soft parts and a thorough mechanical cleansing of the diseased portion, which should afterwards be disinfected, and dressed with suitable antiseptic agents and dressings. No doubt there are many ways in which this can be accomplished satisfactorily.

The use of the burr, I believe to be unskillful and not conducive to surgical cleanliness, in fact its indiscriminate and injudicious use in an infected cavity without checking the hemorrhage and thoroughly cleansing the cavity under direct illumination is positively a serious violation of the laws of aseptic surgery. It is a good rule never to use a drill, burr, or saw, when a knife, chisel or currette will answer the purpose. To use a rapidly revolving and vibrating burr in an infected cavity and blindly manipulate it in all directions, depending solely upon the sense of touch, macerating the soft tissue and leaving the debris to the care of nature is to say the least, very unscientific and certainly cannot be called aseptic surgery.

The trend of modern surgery is more and more toward working by sight and never to depend upon the sense of touch when it is possible to get the parts under direct observation. Here, as well as in the other cavities of the body it gives a sense of security nothing else can supply.

While it is true that the sense of touch can be developed to a remarkable degree and its skillful use is of great aid in the diagnosis and treatment of these and many other conditions, nevertheless, it should never be depended upon exclusively. It has been my privilege to operate on several cases that had been operated upon by the "touch method" and usually a mistake had been made of so serious a nature as to necessitate a second operation.

In my experience, the best results have been obtained by making a free incision over the diseased area down to the bone, then with a periosteal elevator expose clearly and freely the necrotic area with

a few firm movements, with a small blunt probe and a strong artificial light, make a thorough exploration and determine by sight as well as by touch the extent of the softening in the bone.

With a suitable bone currette and a rongeur forceps clean out all debris, cutting out all softened bone, and curretting away all inflammatory products down to solid, white, healthy bone. Control the hemorrhage and explore the walls of the cavity again under strong light, any softened areas should be followed out until all is thoroughly cleansed. Then sterilize the cavity with tincture iodine and carbolic acid, follow with alcohol, pack with gauze and seal over with a heavy tincture of benzoin.

This benzoin solution is water proof and will protect the wound from saliva, is very tenacious thereby greatly assisting in retaining the dressings and owing to the benzoic acid contained is markedly antiseptic. The dressings should not be allowed to remain in the wound over thirty-six hours, and it is better to replace them every twenty-four hours.

The packing may be discontinued as soon as the granulation tissue has fully covered the bone, but I prefer to pack as long as the gauze will be retained.

When treated in this manner there is very little swelling and never any pus after the first dressing, for all infectious material has been removed, the wound is practically sterile and should heal as such.

CASES.

No. 1.

This radiograph shows a lower molar tooth which is normal in every respect. Note the intimate relation between the alvoelar process and the cementum of the root. When the process becomes affected by infection through the root this relation is disturbed or broken. This is plainly shown in the next slide.

No. 2.

The destruction of bony substance is nicely shown in this radiograph at the apex of a lateral incisor, although this not an excellent slide. Patient 25 years old, housewife. Had been having trouble for several years. Pain in the region of the antrum of highmore, which extended to frontal and parietal region quite often. No sinus was present. Eyes had been tested and fitted with glasses. Antrum explored and pronounced normal. The crown on the adjoining tooth had been removed several times but no relief was obtained. This tooth seldom, if ever, became tender or caused any disturbance, and as it contained a beautiful gold inlay was not suspected at all. The x-ray discloses the location and extent of the affection. Case was operated upon as described. Wound healed without complications. Patient has been free from pain for over 18 months.

No. 3.

Mrs. H. 32 years. Had a discharging sinus in region of second bicuspid tooth and in right nostral for six months. The second bicuspid had been extracted but discharge continued. No pain or tenderness upon pressure or percussion of the teeth. X-ray taken Jan. 31st, 1912 and operated upon the next day. Uneventful recovery without any more pus and very little swelling.

No. 4.

Mrs. G. Age 38. Pain in left infraorbital and temporal regions, pricking, stinging pain in left ear. Had an abscess on the left second bicuspid tooth two years before, which was lanced and treated by a dentist, but the tooth always tender upon percussion. No temperature or pulse increase. Had consulted specialists and had nose, ears, and eyes examined and glasses fitted. Also had the antrum washed out, but with no relief from pain. Diagnosed, tri-facial neuralgia. X-ray showed foreign body in root canal extending through the apex. Also rarefication of the bony tissue in the surrounding area. This also shows the anterior wall of the antrum of highmore which is quite intact and unaffected, but very thin and in close proximity to the carious area. Careful currettment of the two areas resulted in permanent relief from pain and an ultimate cure without involving the antral cavity in the least. This case shows the value of the x-ray and how easy it would have been to infect the antrum had a burr been used.

No. 5.

Mrs. R. 33 Years. Patient was very nervous and had suffered with pain in right side of head for many years. Diagnosed—tic douloureux. Examination revealed small sinus over right cuspid tooth which filled and discharged three or four times a year. No tenderness when percussed. Nerve alive. The lateral was slightly tender when percussed, however, and carried an illfitting shell crown. X-ray showed a very small area of caries over the lateral incisor, which was opened and curretted, the gold crown replaced with a properly fitting one. Wound healed kindly and patient is free from usual pain.

No. 6.

Miss L. 25 years. Had an enlargement or tumor under the body of the mandible for ten months, which seemed adherent to the bone. Scarcely any pain. Pulse 108, temperature 100F. No discharging sinus could be found. Had a gold crown on second bicuspid tooth which had never caused the patient any discomfort. Patient had rigidity of the muscles of the right side of the neck and shoulder for six weeks. Not much pain at any time. The crown was removed and the root canal opened, the broach passed down far beyond the apex of the root, it was left in position and a radiograph taken. This shows an area of caries about one centimeter wide and two long, about centimeters below the alvoelar border. An incision was made in the mouth and the area exposed. It had a very thin external wall which was forced out causing the tumor like swelling which was palpable below. This was cleansed and packed as usual the root smoothed

and allowed to remain in position, as the process surrounding the root was almost normal as shown by the radiograph. One interesting thing about this case was that the rigidity of the muscles of the neck and shoulder had all disappeared on the third or fourth day after the operation.

The next two cases I will show more particularly to demonstrate the advantage to be gained by injecting the sinus with bismuth subnitrate paste before the radiograph is taken as it outlines the cavities quite clearly. I would like to state, however, that it does not always give as clear results as is shown in the first one shown.

No. 7.

Mr. F. 26 years. This case presented an enlargement on the left side of the lower jaw two teeth had been removed. Discharging sinus which was injected with bismuth subnitrate paste and picture taken. Incised and curretted. Healed kindly without pus and scarcely any swelling.

No. 8.

Mrs. S. City. Aged 72 years. Poorly nourished. Had four or five sinuses discharging along the ridge of the left lower jaw for several years. Had all teeth extracted below six months before I saw the case, said that the condition improved somewhat.

Injected bismuth subnitrate paste in a sinus near the second molar tooth, and it came out near the cuspid region. X-ray shows extensive caries but even this case there was no sequestrum and probably none would have formed. It was a typical form of caries of the bone. Note the sockets where the teeth were extracted, absorption not having taken place as yet. This case was treated as the above mentioned cases. There was never much pain. This patient had trismus which disappeared after the operation.

No. 9.

Mr. G. Age 45. Patient had a discharging sinus in the region of the molar. Sometimes it would heal for several weeks at a time, only to open again. Some teeth were removed, but it failed to heal. Had a swollen jaw several years ago which was lanced. This case was seen by several competent dentists but as all the teeth seemed normal the case was referred to me. Radiograph shows a foreign body at the apex of the lateral incisor and a large area of caries in this region. Patient did not return for operation. Not much pain.

No. 10.

Miss M. Aged 29. Patient complains of severe pain of intermittent character in the infraorbital region which occassionally radiates over the entire side of the head. Has visited specialists in Chicago and Rochester, in regard to eyes and antrum. Glasses gave no relief, nothing abnormal found in the antrum. Radiograph reveals unerupted tooth (cuspid) with some caries or absorption around the enamel surface. This tooth is probably causing most if not all of her pain. Patient refuses operation.

No. 11.

Miss O. Aged 8 years. Patient had a discharging sinus under the body of the mandible near the angle of the bone. Lower left permanent tooth had been filled several months or a year before. The nerve evidently died under the filling, and the tooth abscessed. Was opened externally. Filling was removed and treated by a competent dentist. It remained quiet for about six weeks, when it again opened and failed to close. X-ray shows areas of caries in the bifurcation of the molar roots and at the apex of the anterior root. The external sinus was removed by desecting it out and closing it with several sutures. Curretted and packed for several days and there was no more pus. Healed kindly.

I have selected common cases, having purposely avoided the more complicated and serious ones. These are typical of the cases that the pyhsician sees in consultation with his dentist friend and for which he is often called upon to prescribe.

There are four points I wish to strongly emphasize. They are:

1st. The remote symptomatology sometimes accompanying such cases.

3rd. The necessity for thorough mechanical cleansing and disinfection; if we expect prompt recovery with the least amount of swelling and and infection.

3rd. The need for accurate diagnosis.

4th. The advisability of using an antiseptic and impervious dressing to protect wound from bacteria of mouth. If these points are kept in mind and faithfully carried out you will be greatly gratified at the promptness with which these chronic cases recover and clear up.

Discussion

Lewis Schooler: I have seen a few people in my life who seemed to enjoy life pretty well, and I did not know that everybody had troubles with the alveolar process. I would not like to say this in a dentist's presence, but between us, I don't believe I have ever seen a case of pyorrhea entirely cured by a dentist. I have seen small abscesses on the gum cured; I used to cure them myself in my country practice by simply lancing them; but that was not pyorrhea. I noticed an article in the Journal of the American Medical Association in which the author states that he makes cultures and injects them, and claims to get good results. If he does, it is much simpler than surgical operations, but I have had no opportunity of observing the effects of this treatment. Of course I know how a surgical operation could cure these cases, because I know all about surgery. The mouth is the filthiest portion of the body, and it takes in all kinds of infected substances, so that you can't tell much difference between it and the kitchen mop. But people hate to pay twenty-five cents for a new brush, and they go on constantly infecting the alveolar process with the old one. There are also various other methods of infection.

The author traced the difficulty to the top of the head, but I didn't notice that he got lower than the waistband in the other direction.

W. W. Pearson: I have learned quite a little from the paper this evening. A nose and throat specialist many times sees a case with indefinite pain about the fifth nerve distribution. We have great difficulty in demonstrating empyema of the accessory sinus many times, and the x-ray unfortunately does not always clear up our diagnosis; but it occasionally happens that something of this kind is demonstrated and proves to be the cause of the discomfort.

One or two years since Dr. Dan Mackenzie had a very extensive article on osteomyelitis in which he referred more particularly to the form, either acute or chronic, following one of the external operations on the frontal sinus. It applies there more particularly than here, but the facts brought out in his article indicate how insidious may be the advance of a process,

and how many patients do not locate their trouble at the focus of the disease, but the referred pain renders the case extremely confusing. When we meet with a case of this kind we have but one course to pursue, and that is to go step by step and eliminate every possible source of trouble. No doubt even with our present knowledge a certain number of cases will still have to be among the unknown, but work of this character reduces that uncertainty. I want to thank the author of the paper for his exposition.

R. H. Parker: I feel that this is a field of medicine in which I am rather a beginner. I was quite interested in the paper, and one point that the doctor brought out has been quite well emphasized to me the past month, namely, the difficulty of diagnosing these cases. I have recently had a case which was seen, I think, by Dr. Wertz and three or four of our dentists; a painful tooth and an enlargement at the end of it, which was opened and cleaned out by curetting and drill in which the results were perfect.

In thinking over the subject as the author presented it, it occurred to me that I had seen cases of rheumatism which were traced to diseased tonsils, and others which were traced to chronic diseases of the prostate gland; and I have even seen ingrowing toenails removed as a cure for rheumatism. I think in looking around for some focus of infection as the case of rheumatism it might be well to have in mind these processes occurring about the roots of the teeth.

W. E. Sanders: I was very much intrested in the doctor's paper and quite impressed with it. I never before realized so forcefully that dentistry, after all, is a department of medicine and surgery. I have nothing to add to the discussion. There is one question which I would like to ask the doctor which has been impressed upon my mind by a case which we have had under observation for almost a year at the Methodist Hospital; the doctor may have seen it. The question is, whether or not these processes of infection, when they get into the cancellous tissue of the jaw from an infected tooth, ever become sufficiently extensive to involve the whole ramus of the jaw. We have had a case under repeated treatment for, I think, a year or more (history dates back for eighteen or nineteen months) in which there was a distinct history of a suppuration at the root of a tooth which was extracted, and subsequently fistulae formed which were opened externally; but this case has never recovered. It has kept on discharging, and eventually this man had almost complete ankylosis of the jaw. The muscles became involved, and he is in horrible shape at the present time. There has been a protracted series of operations on this man. I happened to be present at the next to the last operation, which was about the fifth or sixth, and at that time, the articulation was resected. But the man has not got well yet. He has pus behind his ear and discharging from the orbit and under his temporal muscles, and he is generally shot to pieces with pus. There is no question in my mind that this trouble originated in this man's jaw bone. We took sections of the bone removed, and there were multiple foci in the tissue of the ramus of the jaw, even almost to the articulation, and whether or not this infection ever extends to the contiguous bones is a question I would like the doctor to bring out in his closing discussion. It is certainly a very interesting paper.

W. L. Bierring: I am very sorry that I only heard the last part of the paper; I was very much impressed by that part of it, however. I recall at this time an instance of a chronic infectious endocarditis developing after osteomyelitis of the superior maxillary, which always left an impression on me.

I should be interested to have the essayist explain how he gets those x-ray illustrations in that contracted form; if he puts the film in the mouth, or just how that is carried out.

T. F. Duhigg: I would like in particular to disagree with Dr. Schooler. Somebody ought to disagree with him, and I might as well do it as anybody else, in regard to his proposition about the mouth being such a dirty orifice. I believe the mouth is very clean if you give it half a chance. I think it has been demonstrated that the natural secretions of the mouth protect it to a wonderful extent. The contents of a normal stomach have been demonstrated to be almost bacteria free. I have the word of the dean of one of the leading dental colleges of the country that he has never seen a severe case of infection following the most careless operation on the mouth. There are three classes of men whose asepsis is not as nearly perfect as that of the general surgeon viz: dentists, opthalmologists, and

nose and throat specialists. There technic is all that is necessary for the average case in their special lines of surgery. It is not necessary to carry out the same degrees of asepsis in operation on the eye, nose, throat and mouth as in the internal cavities and tissues generally.

J. W. Bailey: I get a chance to see a good many of these cases of caries, not in my own practice, but from the dentists who refer patients to me for radiographic work. Practically all of these patients are running from one doctor to another, and from one dentist to another, and when we get a good radiograph we usually find some faulty piece of dentistry or something of that nature to be the cause of the trouble. A crowned tooth without a root filling being the trouble in most of the cases.

Dr. Harned: In the first place I want to say to Dr. Schooler that I do not treat cases of pyorrhea alone; I try to get some dentist to help me out with them. There is no question in my mind but what pyorrhea can be cured by thorough mechanical cleanliness. Whether or not there has been much destruction of bone around the roots of teeth greatly effects the prognosis. The administration of an autogenuous vaccine would appear logical, in cases where there is a continuous and obstinate flow of pus.

As far as cleanliness of the mouth is concerned, there is no question but what a large number of people do not pay proper attention to the mouth in the way of keeping it cleansed. If a person is vigorous and healthy, he will keep the mouth fairly proper condition, but there are conditions in which the mouth becomes exceedingly filthy. Where the vitality of the patient is low and he is run down in every sense of the word, the movements of the cheeks and tongue are sluggish and the secretion becomes very thick and ropy, and it becomes a source of infection instead of a cleansing agent. I would like to say that I never saw a malignant tumor or very many other kinds of tumors in a perfectly clean, healthy mouth.

Dr. Pearson said a number of things that I would have liked to refer to, but I was rushed and did not make notes of them.

As to rheumatism, there is no doubt in my mind but that sporadic pains all over the body can be caused by infection in the jaws just as well as in the tonsils or any other place, and I think I brought that out when I mentioned pain running up and down the neck in case No. 8.

Dr. Sanders asks if we have seen cases where extension took place to contiguous bone. It often does in the upper jaw and there is no reason why it should not take place in the lower jaw if it gets up into the ramus of the bone; but that seldom occurs, because there is little cancellous bone tissue there; but if it did, and inflammation surrounded the articulation, there is no reason why it should not extend to contiguous structures and trismus often occur.

Dr. Duhigg mentions the fact that infection does not occur often in the mouth. I don't think that is due to the fact that the mouths of people are particularly clean, or that antiseptics are formed there, but more likely to the fact that the extreme vitality of the tissue, and the extensive blood supply renders infection less probable.

HYDROTHERAPY*

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Hydrotherapy is a term applied to the method of treatment whereby therapeutic results are obtained by the use of heat or cold as produced by water.

Usually mechano-therapy, masseau-therapy, electro-therapy and dietetics are associated with it, both abroad and in this country, however it is not our intention in this paper to discuss these associations.

The earliest accounts of the use of water are obtained from the Bible, which describes bathing as a healing procedure. The most distinguished physicians of all ages have been believers in the use of water and have spoken of it enthusiastically as do the German physicians of today. Hippocrates relied on water extensively in the treatment of gout, fever, inflammations, rheumatism and many other ailments. Galen and Celsus recommended the free use of water in fevers, spasms, hemorrhages, billiousness, headache, constipation, cholera, plethora, ophthalmus, and numerous other complaints.

More than one hundred years ago we find recorded that Doctors Carrie and Wright of Liverpool treated scarlet fever successfully by the use of tepid or cool affusions. Medical history is full of accounts of water in the treatment of almost every malady known, but the above is enough to establish it as an old and tried procedure.

Twenty-five to fifty years ago the use of water as a remedy was almost wholly in the hands of the empiricists, among whom the chief, perhaps was Priessnitz. In 1859 Winternitz, then a naval surgeon, while treating a severe epidemic of possible influenza on the boat, exhausted his supply of drugs, the only agent at hand was water which he began using with great caution. To his surprise those so treated were relieved much more quickly than those treated with quinine and other antipyretic drugs. At the close of his service he immediately began scientific experimentation with Priessnitz to acquire a greater and more accurate knowledge of hyprotherapy. In 1865 he founded the first clinic, and institute of hydrotherapy with 18 beds, which has at the present time a capacity of 400 beds, with an immense out-patient list.

In this country Doctor Trall of New York City, and the physicians connected with the Battle Creek sanatarium and the Dansville sanatarium of New York were the early advocates of scientific hydrotherapy. These institutes at present, and very many others are enthusiastic users of this and other phyical procedures. Among the individual practicing physicians perhaps Doctor J. H. Pratt, of Boston has done, and is doing more at the present time to place

*Read before the Polk County Medical Society.

hydrotherapy on a scientific basis in this country than any other man.

It is a most deplorable fact that this most effective and widely used of agents is so neglected and its uses is so little known by our physicians at large in this country. The fault, and fault it is, must rest someplace. There is no doubt but that we use what we are taught, or at least what we remember of it. We usually follow up what we have studied in our college days and develop along the lines most suited to us. It is no wonder that so little interest is shown in the use of water, since only one medical college in America requires a course in hydrotherapy, and that in recent years. In Columbia the course is obligatory and that in the senior year only. In Jefferson, courses in hydrotherapy are given, but they are elective.

The quackery and the near quackery, or as one has expressed it "the yellow streak," connected with so much of the socalled physical therapeutics, has prevented the competent physician from investigating hydrotherapy.

Perhaps the greatest mistake made by physicians who attempt to prescribe hydrotherapy is over-treatment; the next being incompatible treatment. It is not necessary that we have a great space filled with elaborate and expensive apparatus, in order that results by the use of water may be obtained. A bath tub treatment table, and a bed to rest upon, with the necessary towels and basins. Hot and cold water alone with towels and blankets, are sufficient to get results if the method of procedure and results to be obtained are understood. The equipment of our hospitals with the expensive, more or less effective apparatus, does not solve the problem at all for by ignorant using much harm is done. Better invest much of the money spent, in the services of a competent individual to superintend the treatment than to leave the selection of the treatment to a nurse or a masseuer. The prescription must be definite as to kind and length of procedure, also temperature to be used. It may be understood by the attendants that the feet should be always kept warm, yet that does not excuse the physician for not prescribing the same. A tonic treatment may be prescribed which does not mean anything to an attendant unless the condition of the patient is known and definite directions given. The same is true of a sedative treatment. Hot and cold tonic and sedative are all relative terms depending upon the condition of the patient.

In all hydrotherapeutic procedures the result to be obtained is dependent upon reaction or the avoidance of it. e. g. if the blood flow is to be accelerated the alternation of very hot and very cold applications are indicated. If not, then longer continued heat not followed by severe cold.

Some idea of possible uses may be obtained by the statement of a few results: The size of the arm as first noted by Winternitz can

be perceptibly increased by the use of the cold sitz, at 60 degrees for fifteen minutes. The face is flushed, and a sense of pressure produced in the head; at the same time with a visable carotid pulsation. The size of the arm can be diminished, the face blanched and all sense of pressure relieved in the head by the hot hip and leg pack for 20 minutes with cold to the neck. In like manner the circumference of the abdomen is increased and a sense of fullness in the chest can be produced by the hot trunk pack. In cases of cardiac insufficiency, where there is low blood pressure, the effervescent bath given daily with a lowering of the temperature, and an increase of the effervescence, will greatly relieve many patients, and perceptibly raise blood pressure. The same result may be produced but to a less degree, by the iced mitten friction. Many of the manias are relieved and quiet sleep produced by the wet sheet pack.

Disorders of the digestive tract are benefitted by the proper use of water. The stomach is stimulated, both in muscular tone and in its secreting power by the use of alternating hot and cold to the spine, or to the gastric region. The hot and cold percussion douche given at temperature of 125 and 60 degrees with ten to fifteen pounds pressure is a very satisfactory way of applying this treatment. The amount of hydrochloric acid is reduced by the hip and leg pack, accompanied by an ice bag over the stomach for 30 minutes, daily, before the larger meal. The effect of the hot and cold percussion douche can be demonstrated readily by using it on a patient suffering from hypertrophic cirrhosis of the liver to the extent of some circulatory obstruction. In such a case severe jaundice can be produced with nausea and vomiting in an hour, the discoloring of the skin occuring the next day. In such a case this procedure would not be indicated, but the hot fomentation for 15 minutes, followed by the heating compress would give much relief. This fact will show you at once that much can be done by an agent so potent as to cause such reactions. In many cases constipation can be relieved if not permanently cured by the hot and cold percussion douche. There are many more uses for this procedure which cannot be discussed here.

In the home the applications of water are of great service in the treatment of pneumonia, tonsillitis, croup, diphtheria, dysentery and fevers of all sorts.

The use of the cold full bath is well known to all of us in the treatment of the high temperature of typhoid fever, yet we have all been made to feel sorry for the weakened, exhausted patient who is subjected to this procedure. The same result can be obtained when the skin is cold and dry and the internal temperature is at its height by the use of the cold enema and an accompanying hot sponge bath.

In croup and in the annoying night cough of children as well as adults there is almost instant relief given by the application of the

covered cold compress. In tonsillitis the relief from pain and high temperature are very gratifying by the application of the same. The treatment of rheumatic and gouty affections by hydrotherapy is very effective and the results and much of the procedure is well known to all.

Generally speaking, hydrotherapy is to be used as an adjunct to other treatment, but in many cases we find it all that is needed to bring about the desired end. As a means of obtaining the best results, properly conducted treatment rooms should be at the disposal of every physician. A very satisfactory equipment for such a room has been described recently by Dr. Pratt of Boston. In Boston an institution of this kind has been equipped and conducted by the principal physicians of the city. It is a co-operative institution and is more than self supporting. After maintainence, the funds go to extend the work and promote the study of hydrotherapy. Such an institution should be in every city of any size in our country. Our patients should not have to leave home for such treatment. Our patients should not be forced to go to mineral springs to drink dirty water and be soaked by illiterate and untrained attendants instead of being treated by skilled and educated nurses at home.

I have used partial quotations in expressing ideas from Dr. Pratt, Dr. Trall and others to whom I wish to give credit. Especially thank Dr. Pratt for reprints furnished me.

Discussion.

N. C. Schilling: I enjoyed the payer very much. I always had a little tendency to lean to hydrotherapy. I have never had an opportunity though, to follow it out very thoroughly in the practice of medicine. In my use of it I have had excellent results, in children especially; and I hardly ever use any sedatives with children. I use hot baths, usually the last thing in the evening, and they go to sleep. I have used them in a great many different kinds of cases, and I always get excellent results. I only wish that I had the opportunity to take a special course in hydrotherapy; I think I would be very much interested in it.

M. G. Sloan: I remember when a small boy hearing our old family doctor proscribing somebody who was treating a case of typhoid fever with baths; he was absolutely horror-stricken at the idea. I don't know whether the patient got well or not; I rather think he did; but the old doctor thought it was simply murder. I have watched hydrotherapy with a good deal of interest since I have been practicing medicine. I have not used it as much as I would like to, I am sure there are much greater possibilities in it than most of us realize, and it is something to be studied and handled as carefully as a dose of morphine, in my judgment. I enjoyed the paper very much.

W. L. Bierring: In regard to the sedative effect of hydrotheapy, I recall a very interesting visit of Dr. Schooler and myself at the insane hospital at Cherokee about a year ago, where we were entertained (laughter) for a number of days. We were particularly interested in Dr. Voldeng's demonstration of the new phychopathic ward where the latest hydrotherapy appliances have been installed, and particularly the method of controlling the acute mania cases. They place the patients in a large bathtub in which there is a constant flow of warm or hot water, the patient being supported by a form of suspended jacket. They rest comfortably and at the same time cannot get out of the tub. He keeps them in this running hot water from three to eighteen hours at a time, and maintains that they not only become quiet, but lose their temperature, and that several days' treatment by this warm bath is sufficient to quiet the most violent mania.

I also recall the use of the hot bath in the treatment of extensive burns—the method first introduced by Kaposi of Vienna.

When a patient with an extensive burn is placed in one of these bathtubs with a warm water in it, he seems to be more comfortable than any other way. They naturally do not have a great deal of pain with an extensive burn; as it has a benumbing influence upon the nervous tissues; but it seems to give them a great deal of relief to lie constantly in water.

One of the best things the essayist said was in closing, when he referred to hydrotherapy as a valuable adjunct in various methods of treatment, particularly for functional nervous diseases; and again, that there is great need for the installation of hydrotherapy appliances in our hospitals, where patients could be under proper control; and that there was no necessity for sending patients away to institutes where they were not under proper medical observation.

G. N. Ryan: It was my pleasure last summer to visit a number of health resorts in Germany—eight in number, and I took a special interest in the mud baths as they are given. A few of our party participated in the demonstration of the mud bath. They took us through and showed us how the mud is prepared. It is taken from decayed vegetation and wood pulp into large vats, sterilized and dropped down into tubs, which are wheeled into the hydrotherapy room, and the patients are placed in the bath. It is very thick; I do not know the specific gravity, but it must have been very high. In getting into the tub it seemed impossible to go to the bottom; it held the person suspended, practically speaking. It was not like the common mud, but if the arm was raised and the attendant poured water over it, the mud would come off without rubbing the flesh at all. It acted exactly like a poultice. I was told that it was very effective in articular rheumatism and they claimed a great many other things for it. But in all these different health resorts the pysicians in charge of the bath houses examined the patients and wrote their prescriptions as the doctor has spoken of, giving definite directions as to the length of time, the heat to be applied, etc. It was said that in mild cases of rheumatism a bath taken too hot would precipitate a very severe articular rheumatism which would sometimes become really serious; but by the use of the graduated bath, starting in at a rather moderate temperature and gradually increasing it, it was very much more effective.

I believe that we overlook hydrotherapy as a means of completing a cure in convalescent patients. I think if resorted to this method much more frequently than we do, many of our cases would not drift to the "opathists" in other lines, and that many cases of ankylosis, etc., could be prevented.

Dr. Habenicht: I think I have nothing further to say except that it wasmy privilege to assist in installing the first hydrotherapeutic equipment in an insane hospital in America. I spent some weeks there in the treatment of cases, and there is no doubt but what a greater benefit can be obtained in the care of these cases by hydrotherapy than any other means.

I will say further that I can't hear anybody mention a mud bath or mineral spring without raising a cry. I can't see what on earth anybody wants to get into mud for. It is simply another method of applying heat. When the patient is immersed in mud his respiration is oppressed and there is nothing gained by its use. It does make an impression upon the patient, just as some of our mineral springs do. They will go and drink that water by the quart when it smells like rotten eggs, while good, pure, soft water would give them a great deal more benefit.

BLOOD PRESSURE: HOW TO TAKE IT, AND WHAT IT SIGNIFIES*

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Among the many valuable diagnostic instruments of precision that have been invented in recent years, probably the most valuable since the perfecting of the microscope, is the sphygmomanometer for accurately measuring the blood pressure.

Up to twelve years ago little was known of the blood pressure, and its significance.

It is true that Poiselli invented a mercurial manometer as early as 1828, but it attracted little or no attention. He lived sixty years before his time.

I remember when a student at Bellevue Hospital in '76 and '77 it was a favorite grand-stand demonstration of the great Physiologist, Austin Flint, Jr., to show the blood pressure of the dog by introducing a glass tube into the carotid artery of the living animal.

About this time Marey invented an apparatus with which he was able to determine both systolic and diastolic pressure with remarkable accuracy. But his work attracted but little attention at the time; and it was only in recent years that his pioneer work received due recognition.

Some ten years later von Bosch invented an instrument which consisted essentially of a small rubber bulb filled with water and communicating with a mercury manometer. The bulb was pressed directly against the radial artery until the pulse was obliterated, and this pressure was noted on the manometer. This instrument was modified by Potian who substituted air for water in the bulb. These instruments required too much skill in manipulation, and too much of the personal equation for great accuracy. Their use was confined to a few pioneer investigators, and attracted little attention from the profession in general.

Riva Rocci in 1896 invented an instrument which became the type of all modern sphygmomanometers. It consisted of a narrow rubber bag connected by tubing with a reservoir of mercury, having an upright capillary tube graduated in millimeters. The bag was placed over the brachial artery and held in place with a broad bandage. Air was pumped into the bag until the pulse was obliterated. All the mercury instruments now in use are but slight modifications of the Riva Rocci; and the anaroid instruments which are coming into such common use all retain the most essential part of it, the rubber bag for the compression of the artery.

The early Riva Rocci instrument had a very narrow cuff, or bag, only 5 cm. in width; and after a time it was discovered that the narrow cuff gave too high readings.

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During the early years of the use of the Riva Rocci instrument the readings were all too high, and led to an erroneous conception of blood pressure, which has scarcely yet been fully corrected. It finally became established that the proper width for the compression cuff is 12 or 13 cm. or about 5 inches. This is neither too narrow or too wide.

For ten years after the Riva Rocci invention, its use was confined to a few clinicians, and leaders in the profession, and a number of them made various improvements on the original instrument. Also the anaroid instrument was devised and gradually perfected,—doubtless suggested by the anaroid barometer. So by 1906 progressive men all over the country began to get sphymomanometers. A few years later insurance companies began to require the blood pressure in certain cases. And within the last two years this requirement has become so universal, that now almost every physician in the smallest country village has a good sphygmomanometer; I say good, for this class of men, in Iowa anyway, usually buy the best of everything.

Although the ownership of a blood pressure instrument is becoming quite universal, there are as yet comparatively few physicians who fully appreciate its value in every day routine work; and its use is so new that many have not yet acquired skill in its manipulation. So that some definite directions, just how to take the systolic and diastolic and pulse pressure, may not be deemed superfluous at this time.

A great majority of physicians still take the systolic pressure by palpation, and pay little or no attentión to diastolic and pulse pressure. The oscillatory method of determining the diastolic pressure until recently in use was so uncertain and unsatisfactory, in new hands, that few ever brought it to sufficient perfection to make it of scientific value.

Although Korotkow discovered the method of taking the blood pressure by auscultation in 1905, its use has not become general, nor its great advantages realized until very recently.

The auscultatory method is equally applicable to the systolic and diastolic pressure; and by it both the maximal and minimal pressure may be taken with as great certainty as the body temperature with a fever thermometer. These simple directions will enable any physician who knows how to use a stethescope,—and every physician is supposed to know that, after a little practice to take the blood pressure with certainty and satisfaction.

Seat the patient in a chair near a table or desk. Bare the arm, the left preferably, to the shoulder. Do not allow a tight shirt sleeve to partly obstruct the circulation. Instruct the patient to relax all muscular effort, lay the back of the head comfortably on the table or desk. Place the cuff around the arm opposite the heart, leaving space enough below the cuff at the bend of the elbow to place the

stethescope over the brachial artery. Nothing is to be heard over the artery when it is not compressed, or when completely compressed. Inflate the cuff, while at the same time the fingers of the other hand are on the radial pulse. Note the point on the scale when the pulse is completely cut off, as the pressure in the inflated cuff is slowly increased. This is the systolic pressure by palpation. Now verify this by auscultation. Push the scale ten or fifteen points above where the pulse ceased. Place the stethescope over the brachial artery, and open the needle valve, allowing the air to escape very slowly, one or two points at a time. At first nothing is heard over the completely compressed artery. Suddenly a loud thump of a pulsation is heard as the first blood is forced through the compressed artery. This point marks the systolic pressure, and will be found to correspond very closely if not exactly with the point taken by palpation just before, perhaps one to three millimeters higher. Again allow the air to escape slowly, and following a few of these loud thumping pulsations which soon become duller, is heard in most cases, a more distinct murmur, much like a loud mitral murmur heard over the heart. As the air is still further released, again a loud clear thump is heard, often louder than the first thump heard before the murmur; this thumping sound rapidly becomes duller and fainter as the restriction is released, and all sound suddenly ceases, as the artery resumes its normal caliber. The point where the loud thump becomes dull, and just before it vanishes, marks the diastolic pressure. All this change,—the loud thump, the dull beat, and silence, takes place within very narrow limits of the scale, not more than three to five millimeters from where the first loud thump is heard, and where all sound ceases. So that it is possible to locate the diastolic pressure within one or two millimeters.

All this is done in a fraction of the time I have taken to describe it.

These sounds, heard in the order given are present in all cases. The only variation in this being that the murmur heard between the first loud thumping and the second loud thumping sound is almost wanting in some cases, especially in young persons, but very marked in most cases.

But these distinctly loud pulsations, the first following silence as suddenly as a pistol shot, marking the systolic pressure; and the second, following the dull pulsations and murmur, as the scale goes slowly down, appearing as suddenly and quite as loud as the first, to be rapidly followed by a comparatively low dull sound, which marks the diastolic pressure, just before all sound ceases, are heard in all cases.

This method of taking the blood pressure is so superior to any other, that the older methods need not be discussed.

The systolic pressure can be fairly well taken in most cases by palpation by a skilled hand, but in cases where the radial pulse is not

very distinct, the personal equation becames an important factor, and a variation of five to ten points is liable to occur. But the auscultatory method is accurate for both systolic and diastolic pressure.

Heretofore little attention has been paid to the diastolic pressure. This was due not to a lack of its importance, but to the difficulty of taking it with any degree of accuracy by either the palpatory or oscillatory methods.

But by the auscultatory method the diastolic pressure can be taken with the same certainty as the systolic. Care should be taken not to make pressure with the stethescope and thus compress the artery, which is very easily done. This method is equally applicable to either mercury or anaroid sphygmomanometer.

An anaroid instrument is more convenient and the scale is more easily seen while using the stethescope; but with long tubes to the stethescope no difficulty is experienced in using a mercury instrument. A good anaroid instrument for general use and convenience stands in about the same relation to a mercury instrument, that a good watch does to a clock.

Now just what is blood pressure, and what does it signify?

By blood pressure is meant the arterial tension or force of the blood stream within the arteries. It is evident that the systolic pressure represents the intra-ventricular pressure, that is, the force of the left ventricle during its contraction; and the diastolic pressure, or pressure remaining during the heart's diastole represents the peripheral resistance to be overcome; and the difference between the systolic and the diastolic, represents the pulse pressure, and indicates the extent to which this resistance is overcome. The pulse pressure, or range, or amplitude, denotes the head pressure in the arteries, or heart load, and shows the total variation in pressure occurring in a given vessel during a cardiac cycle.

The vascular system consists of a double series of closed tubes of progressively varying diameters, with a double force pump between and connecting them,—the right and left heart. These tubular systems are each partially interrupted by a series of very minute vessels, the capillaries of the lungs, and the general circulation.

The heart is an intermittent pump, and if the blood vessels were rigid tubes the blood stream would be intermittent also; and each stroke of the pump would have to move the entire volume of the blood.

But the elasticity of the vessels themselves overcomes this difficulty. The powerful systolic impulse which forces the contents of the ventricle into the arteries, dilates the elastic arterial walls, and their recoil carries the current onward in a more and more continuous stream as the smaller vessels are reached.

Arterial pressure is the degree of pressure exerted on the blood flowing through the arterial system; and represents essentially the force of the left ventricle.

It depends on five factors:

1—Cardiac energy, or the pumping power of the heart.

2—Peripheral resistance in the vessels.

3—The elasticity of the vessel walls.

4—The volume of the blood.

5—The viscosity of the blood.

These several factors are of relative importance in perhaps the order in which they are named.

The heart during systole drives the blood out into the aorta; the pressure in the aorta then reaches its maximum and the aortic valves close. The pressure is then maintained by the elasticity of the vessel walls, which have been largely dilated, their recoil forcing the blood on through the arterioles and capillaries. The pressure gradually falls and reaches the minimum at the end of diastole. The pressure depends mainly on the contractile power of the heart, and the peripheral resistance which it has to overcome.

This peripheral resistance depends on the calibre of the vessels, their contractibility and distensibility, whose balance is regulated by the vaso-motor centers of the nervous system.

A normal circulation is shown by a normal blood pressure, which indicates that the heart action, and the distribution of blood is taking place in a normal manner.

This suggests the question,—what is the normal blood pressure?

A study of all the vital functions of the body show that their normal activities are carried on within very narrow limits. For instance, the normal body temperature is 98.6. This applies to all ages and all climates, and only varies in health a fraction of a degree. A very few degrees elevation is a high fever, and a like reduction threatens collapse and death. The normal pulse rate in the adult, at rest is about 70. An habitual variation of 15 beats above or below this denotes disease.

So with blood pressure, its normal range is within narrow limits. It has been pretty well established that the average normal blood pressure for a man is about 125 mm., and a woman about 8 or 10 mm. less. A variation of more than 15 mm. above or below this is indication of disease. I do not mean by variation, a transient functional elevation due to exercise, or excitement, but when the individual's usual pressure is 15 mm. above or below the standard, it indicates, if not disease per se, that he has departed from the normal conditions, which are necessary to the continuance of good health.

This variation is somewhat modified by age. The blood pressure in childhood and adolescence is considerably less than in mature life. The arteries in childhood are delicate translucent and collapsing. There is relatively a large amount of elastic tissue and little connective tissue. As adolescence advances the walls of the vessels become thicker, by the increase of muscular and connective tissue. But it is not until mature adult life that the arteries cease to be col-

lapsable and the lumen of the vessels remain open. After the fifth decade there is usually a progressive thickening of the vessel walls with a relative predominance of connective tissue. These may be regarded as the ordinary physiological changes. With these may occur every degree of pathological changes as, atheroma or calcification, and arteriosclerosis,—which is an inflammatory hyperplasia.

The rule proposed by Faught has been, I think, practically established by a great number of observers, that the normal blood pressure of a young man of 20 is 120 mm.; with an increase of one mm. for each two years of age. Thus the normal blood pressure of a man of 30 is 125 mm.; of 40, 130 mm.; of 50, 135; and 60, 140; and we may take this as the limit of health at any age. A constant pressure above this denotes abnormal peripheral resistance, whose tendency is to increase, and puts work on the heart which tends directly to degenerative changes.

This rule, while perhaps not strictly correct, is a good working formula and represents what I have termed the ordinary physiological changes. These later physiological changes are however, to a degree pathological, as is all departure from the normal, whether due to age or other cause. But from the fact that they are the ordinary and usual accompaniment of age we speak of them as physiological.

We have in the blood pressure both a confirmation and demonstration of that old classical saying, "A man is as old as his arteries."

There are many men of 50 and even 60 and 65, with healthy elastic arteries and unimpaired hearts and kidneys, whose blood pressure is no higher than it was when they were 30; that is 125 mm. while there are many young men with the sclerotic arteries of advanced age.

Fisher in an analysis of the blood pressure of a series of over 13000 men, accepted for life insurance at ages varying from 15 to 60, with an average age of 45, showed they had an average blood pressure of 130 mm. Those whose ages ranged from 15 to 39, a comparatively few at the earlier ages, had an average pressure of 125 mm. While those of the series from age 50 to 60, about 3500 in number, showed an average pressure of less than 133 mm. These were, of course, selected lives, and accepted as standard risks for insurance; but it only emphasizes the fact, that perfectly healthy old men, have but slight increase in blood pressure over healthy young men. Other old men who have a high blood pressure have it not simply because they are old, but because they have cardio-vascular disease.

What then is the significance of a high blood pressure? Faught answers this question, and expresses a most important truth in this sentence: "Every case of persistent high blood pressure is potentially if not actually, a case of myocardial disease." The same may be as truthfully said of the arteries and kidneys.

A persistent high pressure cannot continue for long without resulting in arterio-sclerosis, and interstitial nephritis.

Hypertension is both a cause and an effect. If once set in motion by a disturbance of equilibrium, the effect in turn becomes a cause, and aggravates and perpetuates the condition.

It is not within the scope of this paper to take up the etiology of abnormal blood pressure. This is a deep subject, and not yet fully understood.

We know that the very intimate and intricate correlation of the cerebral vasomotor centers with the pituitary, adreno-thyroid, and the cardio-vascular systems, which normally maintains the equilibrium of metabolism, and all these vital functions, is liable to disturbances from various causes.

Probably the most frequent causes of hypertension and arterio-sclerosis are the various toxemias, especially gastro-intestinal toxemia, known as auto-intoxications.

With a high systolic pressure, we know that the integrity of the heart muscles and the vessel walls are in danger; and that it is only a matter of time when degenerative changes will take place.

Sir Lauder Brunton gives the diastolic pressure, under normal conditions, in the ratio of 3 to 4 with the systolic pressure. This gives the normal pulse pressure as 1-4 of the systolic. This is probably too low. The fraction 1-3 of the systolic represents more nearly the normal pulse pressure. W. J. Stone maintains that under normal conditions the pulse pressure is approximately 50 per cent or one half the diastolic pressure. One third of the systolic, and one half the diastolic is found to be practically the same in normal cases. This applies to rest. During exercise, the systolic pressure is raised much more than the diastolic in the healthy person, with a consequent increase in the pulse pressure, and the fraction of ratio. The range of the normal pulse pressure is given by various observers as from 25 to 45 mm.

Pulse pressure also depends somewhat on the pulse rate. If the pulse is slow, the blood has more time to run through the arterial system during diastole; diastolic pressure is lowered, and the pulse pressure increased. An increased pulse rate will have the reverse effect.

In a strong heart, the interval between systoles is longer, and there is consequently a larger pulse pressure. A weak heart will not raise the tension as rapidly as a strong one, and the time between the end of a systole and the beginning of the next will be shorter, with a resulting lower pulse pressure.

A low systolic pressure with a large pulse pressure indicates large dilated vessels and a presumably strong heart.

A high systolic pressure and a correspondingly high diastolic pressure, giving a normal pulse pressure indicates a normal balance between heart and vessels and a compensatory condition still present.

When the systolic pressure approaches the diastolic, showing a diminished pulse pressure it indicates a failing circulation and a broken cardiac compensation.

When there is a high systolic pressure and a correspondingly very low diastolic pressure, showing a very large pulse pressure, it is almost pathognomic of aortic regurgitation.

The pulse pressure is of the greatest importance in estimating the cardiac muscular efficiency.

This has been demonstrated by Graupner, Gibson and others by noting the relative effect of sudden exercise, as ten bending movements, or running up a flight of stairs, upon the systolic and diastolic pressure.

In case of the normal or unimpaired heart both the systolic and diastolic pressure will be raised, but the systolic much more, giving an increased pulse pressure or amplitude, and indicating a heart strength capable of maintaining its tone under extra strain. While in a defective cario-vascular system the diastolic pressure is raised more than the sysytolic, and the pulse pressure diminished, showing myocardial weakness, and a heart losing its compensatory power. Gibson has expressed this graphically by taking the pulse pressure as the numerator of the fraction, and the systolic pressure as the denominator, before and after exercise. If the fraction is larger after exercise it denotes heart strength. If it is smaller it denotes a failing heart. These exercise tests should be employed with caution in cases with a very high pressure as they are not devoid of danger.

Hypotention, or low blood pressure, while not so common as hypertention has an important diagnostic and prognostic significance. Low pressure is indicative of debility, and low tone of the system.

It is of great diagnostic value in detecting incipient tuberculosis; and is often present when there are as yet no other physical signs. A person with a low blood pressure should be very carefully investigated for this disease.

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Discussion.

W. L .Bierring, Des Moines: I would like to direct what remarks I have to make to the diastolic blood pressure. As the essayist has well said, it is an indication of heart load. In another way it is really the best indication we have of the mass movement of the blood, and as the the mass movement of the blood becomes more difficult, the ratio between diastolic pressure and systolic pressure will come closer together, and in that way, lessening the point between diastolic and systolic pressure, the heart load is correspondingly increased; and, singularly enough, the strain does not come upon the heart so much, but upon the cerebral circulation. So that a man who has a systolic blood pressure of 165 and a diastolic of 140, is not going to die a cardiac death but a cerebral death. It was well said that heart lesions and certain myocardial conditions bring about peculiar changes in diastolic pressure. For instance, the aortic insufficiency always presents a peculiarly low diastolic pressure and a correspondingly high pulse pressure. In the same way we meet it in certain instances of heart-block. I believe there are instances where this wide range or high blood pulse pressure is sometimes an indication of serious processes; at least I have observed one instance recently where it was followed by a cerebral circulatory accident within a few days after this wide range was first observed.

The essayist emphasized the importance or the advantage of the auscultatory method of taking diastolic pressure. There is no doubt that we can make a very fair estimate of systolic pressure by inducing the point when the pulse disappears from the radial artery on pressure over the brachial; but I am sure that the method of determining diastolic pressure by observing the vibratory motions of the needle in the anaroid instrument, or the active instruments of the mercury column in the mercury manometer, is subject to considerable error, and that it is only by the diastolic method of inducing, as the author says, the point where the shock-like sound disappears, and where a slight murmur is noticed just before the sound is entirely lost, that we can most accurately recognize the diastolic pressure. Observation and special study seem to indicate that the proper interpretation of diastolic pressure, and particularly of pulse pressure, is of great practical value.

D. N. Loose, Maquoketa: The paper is certainly an able one, and the subject one of distinct importance, which has not been fully worked out. We have all been taking the systolic blood pressure, but I think comparatively few of us have found any working rules to interpret the findings of the systolic and the pulse pressure. The ratio that Stone has brought out I think is the best working rule we have today, that the pulse pressure should be about fifty per cent of the diastolic pressure. I read somewhere—I think the article was by Gibson, that the important sign of value in pneumonia is the ratio of the pulse rate to the systolic pressure. When the systolic pressure is lower than the pulse rate it is a bad indication. A systolic pressure of 110 or 100 and a pulse rate of 120 is also a bad indication and shows a failing, myocardial muscle. I think Gibson also speaks about the tap instead of thump. I think that is better than thump. The sound you hear is a very distinct tap, tap, tap, and the longer you can hear that sound in exhausting disease the better is the condition of the circulation. Any variation of that distinct tap with low blood pressure is, I think, an indication of heart weakness.

Dr. Crawford: I have nothing particular to add except two points: to urge on all who have not learned to take habitually the pressure by stethoscope, to learn to do it for the sake of its accuracy; and then to call attention especially to the value of the diastolic and the pulse pressure. This is comparatively a new study. We don't get anything so very definite from the old authorities, but we know that while the systolic pres-

sure tells us a great deal, it may even be misleading; but if we check that up with the condition and know what the resistance is and what the excess heart force is as represented by the pulse pressure, it gives an index to the condition. For instance, we may take a man of sixty who has a systolic pressure of 135, and we think that is fine. If we hadn't anything else to go by, it would be fine, but we know there is something the matter with him. We take the diastolic pressure and find it 110 or 120, with a pulse pressure of 25 or 15, and we know there is something very serious the matter. He is losing his compensation and has a failing heart.

SOME SIMPLE BUT IMPORTANT THINGS OFTEN BADLY DONE*

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To secure the best results in surgical work, many little "kinks" require careful consideration. Very often these "kinks" are indifferently done, and sometimes done so poorly as to bring disaster. I wish to call attention to some errors I sometimes see both in the hospital in which I do most of my work, and in hospitals in which I occasionally operate. All the points to which I shall refer may seem elementary; they are but none the less important.

Instruments should be boiled in a carbonate of soda solution, and this means that instruments should be boiled and not steamed. There was a time when it was an open question whether instruments should be boiled, steamed, or baked. But this question has long since been decided in favor of boiling. To have an inch or more of water in a boiler with the instruments on a tray above the water, or partially submerged, is not boiling. With this sort of a procedure the bicarbonate of soda becomes absolutely useless. Recently, I was told by the head nurse of a hospital that this was the proper way to sterilize instruments, that it was so done in every hospital. We agreed, each of us, to write twelve hospitals, asking how instruments were sterilized in the respective institutions, which we did. I handed the answers I received to the nurse without opening them, and the twenty-four replies were in favor of boiling, in not a single hospital were instruments steamed. There must be enough water to completely cover the instruments. Recently I operated in a sanatorium (I always dread sanatoria for surgical work) and was told that the instruments were ready. But I am from Missouri sometimes: I removed the lid of the sterilizer. The instruments were scarcely warm, and quite dry, the nurse having forgotten all about the water.

Gloves may be sterilized for ten or fifteen minutes in a pressure sterilizer at fifteen pounds, but must be laid flat and straight, with the cuffs turned back. If boiled, they should be filled with water and wrapped in a towel, and should be completely submerged. But recently I saw a surgeon turn his gloves by blowing into them instead of turning them as every nurse is taught to do very soon after

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*Austin Flint-Cedar Valley Medical Society, Mason City, July 9, 1913.

she enters the training school. The nurse who was present at this operation and who saw the doctor blow into his gloves, wrapped the gloves into a very nice ball, and threw them into boiling water to sterilize them. Of course, they floated on the water. I have absolutely no confidence in such sterilization. I repeat: The gloves must have the cuffs turned back and should be placed perfectly straight that steam may enter to the finger tips. If not steam sterilized they should be filled with water and completely submerged. When gloves are mended, the patch should always be placed on the inside, indicated by the number and the hem. Have you ever seen ladies wear gloves with the number and the hem on the outside? The glove maker will tell you that rubber gloves are made over a form, and that the "hem" and the number are put on last, and consequently the band and number indicate the outside. According to this argument, I am wearing by coat inside out, and I have no right to wear it the way I think it should be worn, because the making was practically all done with the garment inside out. But just take up this question, and you will find that every doctor and every nurse knows exactly which is the inside, and which the outside of a glove. But unfortunately they are about equally divided. Augustana hospital nurses are sure that the hem and number are on the inside, Mercy Hospital (Chicago) nurses are equally positive that the hem and number are on the outside. Since the hem and the number indicate the inside or the outside of the glove, when mended the patch should always correspond to the hem and number side, or it should not so correspond. If the gloves are put on dry, both the hand and the inside of the glove should be well powdered, and the glove put on with the hands held directly upward, that the excess powder may not gather in the finger tips. Of course, the cuff should be turned back to shorten the gloves, and to facilitate the introduction of the hand. The operating room nurse has quite enough to do without standing attention, ready to hold the gloves while the operator thrusts his hands into them. I cannot recall having seen a surgeon permit a nurse to thus waste her time, except once, and that surgeon was wan and feeble at the time. He has since grown strong and is able to help himself and always does so. A really great surgeon lately told me that he would quit when he grew to feeble to put on his gloves without assistance.

Some five years ago I had two deaths due to post-operative dilatation of the stomach, this in turn due to acute streptococcus infection following clean, simple appendectomies. At the same time there were three other deaths in the house in the service of other men, and a dozen cases of severe infection. I believe that this infection was introduced into the house by a puerperal fever patient that had not been properly isolated, the nurse in charge caring for other surgical cases. Upon investigation, it was found that dressings were sterilized under a pressure of fifteen pounds for fifteen

or twenty minutes, a large sterilizer being used. The point I wish to make is that fifteen or twenty minutes is entirely insufficient to sterilize the large amount of material a large pressure sterilizer will hold. In my office the Bramhall-Dean pressure sterilizer is run at fifteen pounds pressure for two hours, and one hour to dry. I know this is longer than is actually necessary, but I expect even the most faithful of nurses to occasionally shorten the time, and when the instruction calls for fifteen or twnety minutes this time may be further shortened. I am sure that the sterilizaion in my office is efficient. In a hospital nothing less than one hour ought to be accepted. Whether the sterilization was at fault in the deaths referred to I do not know, but there was no trouble after the operating room nurse was told that she must keep up steam for two hours, at least until the trouble was over.

The proper preparation of the hands is a procedure about which we know very little, except that a perfect method has not yet been formulated. There are three principal methods: that of Fürbringer in which water, soap and brush, and bichloride of mercury are used in the order indicated; that of Ahlfeld in which water, soap, and brush, are followed by alcohol; and that of Meissner in which only alcohol is used, the soap, brush, water, and bichloride being eliminated. According to a recent experiment by Marquis, the best results are obtained by the method of Meissner, the next best by that of Fürbringer, and the poorest by the method of Ahlfeld. In the Meissner method, the alcohol method, alcohol only is used, and the alcohol must not be less than 70 per cent or more than 95 per cent and denatured alcohol gives results in every way as good as grain alcohol. I do not use denatured alcohol, preferring grain alcohol. Perhaps, this is only sentiment, but I do not like the odor of denatured alcohol, and it creates the idea of economy in a direction where cost should not be considered. I have long since been divorced from bichloride of mercury and the brush. It has been conclusively shown that soap, brush, and water, used for fifteen minutes, with five changes of brush, soap, and water during these fifteen minutes, leaves more microbes to a given area of surface than were present when the procedure was begun. This is like harrowing a potato field after plowing out the potatoes, the more harrowing the more potatoes are exposed. While conceding that there is no longer any good reason for using water and mechanic's or marble dust soap, I have not been able to tear myself away from my early habits. I do not like the word "habit", but that is about the only reason I can give for using soap and water, with a sponge. When I hear an operator say that he is in the habit of doing a certain thing in a certain way, I think that he is about ready for the scrap heap. Habits are usually pernicious when they are the only reason for a given practice. The alcohol part of the sterilizing procedure requires time. So often I see doctors and nurses devote less than one-half a minute

to this procedure. I sometimes think that they have been to Chicago and have seen a great surgeon with lily-white hands devote ten seconds to the alcohol. But they forget that this great surgeon has the carefully manicured hands of the society lady, his skin is soft and smooth, and he keeps his hands clean, far different from those of us who have to do with horses or automobiles. To be efficient, grain alcohol should be used by you and by me, and by nurses, for not less than ten minutes, and should be used full strength. Only two or three days ago I was assisted by a nurse that devoted about one minute to the alcohol part of the hand disinfection process. I said, ''You have done well for one minute, but please continue your efforts with the alcohol for at least nine minutes longer nothing less than ten minutes is to be trusted.'' The stronger the alcohol up to 95 per cent, the better, although little is gained by a per cent higher than 95 per cent, as has been conclusively proven by Major Seeling, of St. Louis. Some years ago I had occasion to use alcohol in a lamp and helped myself to the contents of the alcohol bottle in the operating room. To my surprise this alcohol would not burn, and on investigation disclosed the fact that it was a 25 per cent alcohol. Whether the substitution of his water and alcohol was due to economy, or due to the teaching that 25 per cent alcohol is as efficient as 95 per cent alcohol, I do not know, but I do not believe that any up-to-date surgeon any longer uses diluted alcohol. The old statement that 70 per cent or even a 40 per cent alcohol is as efficient as a 95 per cent has been proven wrong time and time again. But we know so many things that are not true, and it is so hard to unlearn.

We may not wholly accept this no water, no soap, no brush method of preparing the hands, yet it is a great comfort to know that in an emergency alcohol alone is efficient. In an accident, say on the farm or in railway surgery in the field, alcohol will answer every purpose. If a sterile basin be considered necessary, alcohol burned in the same will sterilize as efficiently as steam. With a quart of 95 per cent grain alcohol, and tincture of iodin any emergency may be met.

Now we have out instruments, our dressings, and our hands properly prepared. We are ready for the patient.

In spite of all that has been said every now and then a patient is brought to the operating room with a moist bichloride compress over the operation site. When I see that moist bichloride compress, or any other compress, I feel that I am carried back to the very early era of antiseptic surgery, quite to the time it was born, with the operation under a carbolized spray. I regard those responsible for this compress as venerable hermits that have been living a life of seclusion and prayer, quite apart from their fellow men. I am quite sure about the seclusion. To these operators I should like to repeat the suggestion made by Jacobi at Minneapolis: ''Watch

more and pray less''. The man that carefully cleanses an injured hand or foot with water, soap, and brush, following this procedure with iodin is also entitled a place in the hermit's class. Iodin disinfection depends for its efficiency on tincture of iodin, any other addition only works harm.

Returning to the formal preparation, the best results are obtained by giving the patient a bath the evening before, then clean bed and body linen, without all further preparation of the operation site. On the operating table, one coat of tincture of iodin should be applied just before anesthesia is begun, a second just before the incision is made, and a third just over the line of sutures when the wound is closed. If for any reason whatsoever there is not sufficient time to give the bath, the iodin must be applied without any preliminary preparation whatsoever. If necessary to shave the site of operation, the shave should be dry.

To be efficient, the iodin must be applied to a dry surface. To use soap and water immediately before operation, drying the surface with gasoline or alcohol is to be condemned. It is a question whether the removal of the fat from the skin, or the saturation of the cells with water interferes most with the efficiency of tincture of iodin. If soap and water cannot be used at least four hours before the patient is to be operated upon, it should be omitted entirely. Tincture of iodin must be fresh, if blistering is to be avoided, and a fresh tincture of iodin means a fresh tincture. It does not mean that the tincture of iodin is necessarily fresh because it is bought in a drug store just before using. There is only one way, and that is the method of Reclus, who has seen much blistering with tincture of iodin. Reclus says, ''I do not know why old tincture of iodin blisters, nor am I especially interested to know, because I always use a fresh tincture of iodin.'' His method is to put a given amount of iodin into a small vial, and add the alcohol just before using. We had considerable blistering in Davenport, and also in Iowa City, until this method was introduced.

Forty grains of iodin to the ounce of alcohol will give an approximately 10 per cent alcohol solution of iodin. Forty grains of iodin in a four ounce graduate vial is very satisfactory. The addition of one ounce of alcohol will give a 10 per cent alcoholic solution of iodin, the addition of two ounces will give a 5 per cent solution, three ounces will give a 33 1-3 per cent solution, and four ounces a 2 1-2 per cent solution. Of course, a larger quantity of iodin may be used, and a correspondingly larger quantity of alcohol, but never more than will be required during the next twenty-four hours. Recently, while casually present at an operation the operating surgeon gave me a water tumbler, a bottle of iodin crystals, and a small bottle of alcohol, saying: ''Prepare the iodin according to Littig's method.'' My reply was, ''Impossible! Littig uses a pair of scales for the iodin crystals, and he carefully measures the alcohol.

He does not guess about this matter.'' Iodide of potash need not be added if the alcohol solution of iodin be used promptly. I have seen absolutely no trouble from blistering since using the Reclus method, and I have applied six coats just to try it out. Some time ago a surgeon in applying tincture of iodin permitted some of the iodin to trickle between the thigh and the scrotum of the patient. The skin over one of the testicles sloughed away completely. Any one applying iodin in this way ought to have the skin over the testicles slough, he ought to lose a testicle but it ought not to be that of his patient. There is no excuse for carelessly sopping iodin all over the map, and have it run in little rivulets onto the table nor between the thighs of the patient. Iodin must be spread over a generous surface. So often do I see it painted over a surface as large as the hand, when it should be an area of at least twelve by eighteen inches. Ochsner uses one coat of a 16 per cent tincture of iodin, (Churchills) and it is always neatly applied, there are no rivulets flowing in any direction.

I believe that the use of wound cloths to prevent the hands of the operator from carrying the tincture of iodin on to the parietal or on to the visceral peritoneum is advisable. I cannot believe that it is a matter of no moment whether tincture of iodin be carried into the abdominal cavity or not. I believe that it tends to encourage adhesions. Incidenally, I do not like the Moynihan clamps, as they lie on top of the wound cloths. The ordinary towel clamp holds the wound cloth just as well, lies under the wound cloth, and is much to be preferred.

Incidentally, I had a patient on fire a few days ago. I made a free incision into a breast tumor to determine whether or not the growth was malignant. It was cancer. I applied a hot iron to seal the wound, there was a burst of flame. I had the same thing happen on one occasion when using kalene for local anesthesia. I appled the hot iron to the frozen area. My tincture of iodin experience is not unique. Recently, a noted French surgeon had a mal-practice suit based on the same accident. Of course, a little waiting would have avoided the accident.

Talking about accidents, let me tell of a recent experience. A patient to be operated for gall stones was assigned to her room at 10 A. M. I made my first call at 1 P. M. Three hours later, I immediately detected the pungent odor of formaldahyde, and ordered the windows opened at once. The patient's sister said, ''We have all been crying, doctor, because our eyes hurt.'' The operating room was rather cold, and there was a further wait of about one hour. The patient took the ether badly, coughing quite a bit. She was no sooner out of the anesthetic than she said, ''I am all right, but I cannot get my breath.'' And such efforts to breath for the next four days, such tugging of all the auxillary muscles of respiration with loud, course rales heard without applying the ear to these, and

such suffering, with final complete recovery. But the four days of worry due to the ether and formaldehyd I shall never forget. One year ago I should have considered this accident impossible. Some of you may have it before you attain my age, so please do not point the finger of scorn at me.

Conducive to the after comfort of the patient in all cases, is a quarter of a grain of morphine given immediately after he reaches the bed, that he may pass directly from the sleep of ether into the sleep of morphine. Equally conducive to comfort is the free use of water after the operation, by proctoclysis, a pint to a quart being given by the drop or the low gravity method just as soon as the patient is put to bed, and a pint to a quart every two or four hours until water is taken freely by the mouth, a pint every two hours or a quart every four hours.

Continuous proctoclysis does not mean that water is given continuously, but the bowel should rest half of the time. If the directions be a pint every two hours, the entire amount should be given in half of this time, or about 128 drops to the minute. If the order be for a quart every four hours, the rate should be the same, the time required being two hours, leaving two hours for rest.

Recently tap water has been advocated instead of normal salt, and we have been using this for some months, or whenever the thought is to relieve thirst. We have not yet ventured to substitute tap water for normal salt solution in cases of peritonitis, although there seems to be no reason for not doing so. Patients should be permitted to drink freely of water just as soon as they desire it, barring of course, operations on the stomach. If the water is vomited, it tends to wash out the stomach; if it is not vomited, it quenches the thirst, making it possible to discontinue proctoclysis all the sooner. Ice and ice water for quenching thirst should be banished from the sick room. I remember when we gave our patients teaspoonsful of cracked ice, or a little iced champagne, later ice water. I hope that I may not be called to account on the day of judgment for these transgressions. My intentions were good, but my practice very bad.

I cannot understand why so many surgeons permit the nurses to ignore the respiration in the record sheet. The respiration gives most valuable and comforting information or timely warning. I do not see how a patient with eighteen or twenty respirations per minute can be going wrong, but any increase in the frequency of respiration is a signal that all is not quite well. I always insist that the record chart include the respiration.

Only a few days ago I was visiting a surgeon in Missouri, quite a man. With some pride he presented his patients, a breast case with the dressing over the gall bladder, and an appendix case with the dressing over the umbilicus. He did not use adhesive strips, and his dressings simply crept to the easiest position without regard to the

duty assigned them. This surgeon used bichloride gauze over the wounds, and such angry rebellious looking wounds, with the silk worm gut sutures drawn so tight they were almost buried. He actually removed a drainage tube with the finger, and took up a soiled dressing with his fingers. His colleague, also quite a man, graciously demonstrated other patients, one a twenty-four hour appendectomy. No adhesive strips were used, and no trouble to see the wound, as at least half of it was uncovered. After leaving the room, I said; "Doctor, why do you put bichloride gauze over your wounds?" "But I do not," he said. "Oh Doctor, I am quite sure that you have bichloride gauze over that appendectomy wound." I have not, I am sure of that." I persisted. "Let us take another look." We did, and the irate doctor turned to the nurse, "Who put that bichloride gauze over that wound? You know that I do not use bichloride gauze over a wound, change it at once." But after all, bichloride gauze is all right for a hospital where adhesive strips are not used, where dressings do not remain they are put, where one surgeon removes a drainage tube with his fingers, where the other does not know what kind of gauze is over the wound, and where the nurse is ordered to change the gauze at once, the wound already showing resentment because of the mal-treatment it was receiving.

I should like to repeat: A quarter of a grain of morphine immediately after the operation to relieve the unconscious manifestations of pain and discomfort, and a quart of tap by the bowel to silence that pitiful plea for just a little water to moisten the lips. Water freely just as soon as the patient desires it. Of course, if the thought be to encourage vomiting tepid water should be given. Hot water has a place, but ice water is baned.

After a most tragic experience with post operative dilatation of the stomach, you are not surprised that I always keep an anxious eye on the condition of the abdomen, and any distention of the upper part as an indication of coming trouble, while a scaphoid abdomen, especially the upper part, is a signal that the surgeon may go to bed untroubled by that spectre, post operative dilatation of the stomach.

Before closing I want to make a plea for better surgery by calling attention to a means to make better surgeons and to prevent bad surgery, at least to a certain extent. I believe that every operation in every hospital should be bulletined, and that every member of the hospital staff or every physician who has the privilege of the hospital should have a standing and urgent invitation to witness the operation. Not only will this increase the practical experience of every man working in a hospital but will often prevent unjustifiable and, sometimes, reprehensible operations, to use a rather mild term. That patients will not object, is evidenced by the success of those hospitals in which not only the operating room is open to all members of the hospital staff, but to all members of the profession.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

EDITORIAL

Purchase of the Iowa Medical Journal By the Iowa State Medical Society.

Under a resolution passed by the House of Delegates, the Board of Trustees purchased the Iowa Medical Journal, edited by Dr. E. E. Dorr, this purchase to take effect July 1st. Therefore the Iowa Medical Journal will close with the June number, completing Volume 20 of said publication. The Iowa Medical Journal has become well known to the profession of the state, and for five years published the papers and transactions of the State Society. Dr. Dorr finding that the work on the journal interfered seriously with other business arrangements, concluded to sell his journal and made an offer to the State Society which was accepted by the House of Delegates at the Sioux City meeting, and referred to the Board of Trustees.

It has been decided by the Board that a short volume consisting of six numbers shall complete Volume 4 of the Journal of the Iowa State Medical Society, and Volume 5 shall commence with the January 1915 number. The size of the page will be changed to 8x11, conforming with nearly all of the larger state journals. The calendar year being made the fiscal year for the business of the Iowa State Medical Society, and as the membership begins with January, we thought best that the volumes of the journal should in the future begin with the January number. This will be more convenient for all parties concerned.

Carnegie Foundation Report.

The Carnegie Foundation in its recent annual report, makes some rather severe criticisms on education matters in Iowa, especially in relation to the State University. Criticism coming from this source should be very carefully taken to heart and considered prayerfully. The report not only touches upon the State University but includes the State Agricultural College at Ames and also our entire school system. It is made to appear from this report that neither the Legislature nor the Board of Education have been able to free themselves entirely from political consideration in all that relates to higher education. It is made to appear that the Legislature governed by good intentions and made up of good intelligent men, have been unable to make up a Board to conduct educational matters without being influenced by political consideration; that it has not

been possible for the Governor in selecting a Board to consider the appointee's fitness to direct educational matters, but has taken into consideration the various political methods which are too well known to need any elaboration. The result is that the Board of Education, unconsciously it may be, sees things through political glasses and are governed accordingly, and it is to be feared that they have not been able entirely to overlook the influence of what is known as "vested interest." We cannot for a moment think of the Board of Education being governed by other than honest methods, nor would they intentionally allow business interests to stand in the way of educational development, but it is difficult to say how educational matters in Iowa can reach the highest standard of excellence unless different views are attained in the Board.

We have been advised by good authority that in the State Agricultural College, a professor in the Agricultural Department who had reached some distinction in the line of his work, had been designated by the Department of Agriculture to inquire into the respective value of certain live "stock food" products. The department placed at his disposal quite a large number of hogs and cattle. A part were fed on "stock food" products and a part on natural food, and a record made as to the results. The published reports were to the effect that the natural foods were the best. This, of course, was not agreeable to certain "vested interests" which were using the agricultural papers of the state for the purpose of creating a market for their products. After repeated warnings which the professor did not heed, all the machinery of politics were set in operation to destroy him, and were successful.

We have sometimes wondered if certain interests intrenched at the State University were not responsible for the destruction of President Bowman, not "vested interests" entirely' but operated very much in the same manner. We know the fate of Dr. Wiley at the hands of the vested interest operating the great political machine, and we are impelled to inquire what would have been the fate of Dr. Geo. H. Simmons in his attack on so-called "vested interests," if it had not been for the great body of intelligent medical men behind him. It is painful to reflect upon matters of this kind, and it is difficult to believe that the education interests of the great state of Iowa are to be held in check by political consideration, not always directed by special interests but probably more frequently governed by the curious and undermining influence of politics all of which creates a vague feeling of uncertainty in the public mind as to the fitness of the Board in directing educational institutions in such a manner as to secure results commensurate with the money expended by the state, and of the uncertainty as to the possibility of bringing up our educational institutions to the standard of similar institutions in our neighboring states. If any improvement is to be accomplished it must be through agitation and enlightened public opinion upon

these subjects. Any man who criticizes home institutions is apt to be regarded as a knocker when in fact he is a critic and is as earnest and zealous as anyone to secure better conditions, which he believes can only be brought about by publicity. It is to be hoped that the last report of the Carnegie foundation will be thoroughly read by all interested in educational matters, and that the influence of such criticism may be helpful in canvassing the question of the constitution of the governing bodies of our state educational institutions.

Industrial Accident Work.

The California State Society through its House of Delegates adopted a plan recommended by the Council of the State Society relating to industrial accident work. We offer a part of the report of the Council which was adopted. It will thus be seen that the profession of California are quite alive to the conditions that are surely coming about. In our editorial upon this subject for the June number, we called attention to the desirability of having a committee appointed for the purpose of considering the question, but it will probably be better for the Council of the State Society to go over the whole subject and ascertain what is the best course for the profession in Iowa to take. It is utterly useless for us to say what we will or will not do because we are very likely to adopt the course that will give us a living. If the Council of the State Society would take up this subject and formulate a plan which could be passed by the Industrial Commissioner, it would accomplish much more than a flat refusal which is not adhered to, and the whole matter could, no doubt, be adjusted in a friendly way, and to the advantage of all parties concerned.

"B." Contracts: No contracts at flat, fixed fees for all work are to be made and those now existing are to terminate at the earliest possible date.

"C." Schedule: The fee schedule which has been prepared as heretofore indicated and is herewith presented to you, is recommended for the approval of the Medical Society of the State of California and of its various county units, as a schedule of the minimum fees to be charged for the services indicated in the schedule in the treatment of persons who may be injured as specified in the law. Additional compensation will be allowed in unusual services on proper representation.

"D." Choice of Physician: The employer (or the company, if the employer is insured) is to have the right to a free choice of physician and such selections are to be made from lists of names furnished by the insurance companies, these lists of names to be the lists of members collectively compose the Medical Society of the State of California, but no member may be compelled to do the work if he does not wish to. Provided, that in counties where there is no county medical society, or in special cases where the employer may

desire to secure the services of some physician who is not a member of his county medical society, he reserves the right to do so; also provided that in the larger centers the societies are to prepare lists of names of members who are willing to do the work and to arrange so that the services of some of them may be secured at any time, by means of a telephone exchange or some other plan by which their whereabouts may at any time be ascertained; and also provided that the companies are to be permitted to advise their policy holders that certain physicians have, in the past, done work for them satisfactorily. It is understood that an insurance company may have a regularly appointed medical referee in any given locality.

"E." Adjustment of Fees: In case a bill rendered by a member is regarded as excessive by the employer (or company) it shall be submitted to the county medical society for scrutiny and adjustment, and if there be still failure to agree, it may be submitted to the Council of the State Society or to the Industrial Commission.

"F." County Units and Professional Conduct. In order to carry out the provisions of this plan, it will be necessary for each county unit to approve the schedule so far as it applies to the work indicated and to persons whose income does not exceed the maximum indicated in the law. Charges in excess of the proper ones, or bills unduly padded by ficititious or unnecessary visits, shall be deemed unprofes sional and subject to discipline by suspension or expulsion.—(Adopted.

Some Interesting Information in Regard to Medical Defense by State Societies.

The journals of some of the state medical societies are publishing reports of their annual meetings and offering some interesting facts in relation to the cost of defending suits.

The Journal of the California State Society shows that the cost of medical defense in California for the past year has been $5,213.10. From the same journal we ascertain that the income of the State Society for the past year was $18,699.62 and disbursements $19,967.67. It appears that the cost of the journal and the cost of medical defense in California is $17,389.51. Net deficiency $1,881.35. The Journal states "We would point out that the payments for medical defense for 1913 amounted to $5,213.10, against $3,242.87 for 1912."

The Journal of the New York State Medical Society reports 57 new cases of malpractice for the year 1913, and the Finance Committee of the Council has appropriated $6,500 for the defense of malpractice cases for the year 1914. The Journal gives the total of legal expenses for the last seven years. It shows that the expenses for 1906 were $3,461.75, and for 1913 $4,952.58. It will be seen that the cost of the California State Journal for the past year was $12,-176.41; its income from advertising $6,564.30. The cost of the Journal of the New York State Medical Society was $10,728.93; advertis-

ing income $4,617.87. The size of the California journal is 51 pages reading matter double column, size of page 8x11, 41 pages of advertising. The size of the New York State Journal is 58 pages reading matter, double column, and 19 pages of advertising including covers. Size of page 8x11. The Journal of the Iowa State Medical Society about the same amount of reading matter, has cost the State Society $3,758.79.

Boosters and Builders.

To boost is one thing, to build is another. The booster shouts and pushes and insists that all others do likewise. He resents criticism, no matter how impartial or how long over due. The builder carefully studies the proposition; he is especially anxious to discover weak parts that they may be strengthened or replaced. The builder knows that the stability of the structure depends on the elimination of weak features, because the entire chain cannot be stronger than its weakest link. The booster loudly heralds as "knockers" those that do not agree with him, he offers a personal motive in explanation of every criticism which touches the weak point in his proposition, and which has for its object its elimination. He regards as an enemy to his cause the individual that fails to endorse it in every detail. The booster always tries to discredit the motives of the most honest critic.

Liability of Surgeon of Charitable Institution for Leaving Spring From Packer in Uterus.

(Wharton vs. Warner et al. (Wash.), 135 Pac. R. 235.)

The Supreme Court of Washington directs that a judgment be entered against the defendant Warner for damages for malpractice. The court says that he was employed at a sanatorium as the surgeon in charge thereof and that in the treatment of Mrs. Wharton, by a curettement of the uterus, he used a uterine packer, and a spring therefrom, some 12 inches in length, became detached from the machine and was packed into the uterus and allowed to remain for a period of fifteen days.

Passing to the law of the case, it may be announced as one of the fundamentals of the law that negligence is never presumed, but that it must be affirmatively established by competent evidence.

It is equally well settled that, when a physician and surgeon takes charge of a case, he impliedly represents that he possesses, and the law imposes on him the duty of possessing and exercising, reasonable skill and learning, that is, such skill and learning as is possessed by the ordinary practitioner in that general locality, measured by the state of medical and surgical science at the time the service is rendered.

Tested by these principles, there was abundant evidence of Dr. Warner's negligence. Indeed, it would excite surprise had the jury returned a different verdict. The jury was warranted in finding (a) that he was guilty of negligence in leaving the spring in the uterus; (b) that he was negligent in failing to discover and remove it; and (c) that the packer with which he performed the operation was not then used by surgeons possessing average learning and skill in that locality.

It was argued (1) that whether a surgical operation was unskillfully performed is a question of science and is to be determined by the opinion

evidence of surgeons; and (2), in effect, that a bad result standing alone is no evidence of unskillful surgery. From these postulates it was argued that there was no evidence to sustain a verdict against this defendant. Both propositions are sound when soundly applied. The reason is that in most cases a layman can have no knowledge whether the proper medicine was administered or the proper surgical treatment given. Whether a surgical operation was unskilfully or skilfully performed is a scientific question. If, however, a surgeon should lose the instrument with which he operates in the incision which he makes in his patient, it would seem a matter of common sense that scientific opinion could throw little light on the subject. So, in this case, when the surgeon loses a metallic spring about 12 inches in length, and about 1-16 of an inch in width, in the body of his patient, and fails to discover and remove it, it would seem that a jury would have abundant justification for inferring negligence without the aid of expert testimony. But, putting this view aside, the court thinks that the evidence set forth was insufficient to support the verdict.

But the medical missionary and benevolent society, organized for charitable purposes only, which conducted the sanatorium and which the evidence showed exercised reasonable care in selecting Dr. Warner, could not be held responsible for his negligence. The same rule applies when the plaintiff pays for the services rendered, where the amount received is not for private gain, but to accomplish more effectually the purposes for which the charity was founded.

Alumni Clinics.

The next Alumni Clinic of the College of Medicine of the State University, will be held at Iowa City, October 22nd and 23rd, 1914. These are the two days immediately preceding the home-coming for the Iowa and Minnesota football game.—Henry Albert.

The Toronto General Hospital.

The cost of the new General Hospital at Toronto, when it is completed, will amount to about $3,400,000. It will be one of the most modern and best equipped hospitals on the continent and will accommodate nearly seven hundred patients.

Dr. James R. Guthrie was presented with a beautiful loving cup by his former students upon the completion of his twenty-fifth year as a professor in the College of Medicine of the State University of Iowa, June 17, 1914. The presentation was made at the time of the Alumni dinner.

Drs. Dean, Kessler and Rowan of Iowa City are among the Profession who attended the meeting of the American Medical Association at Atlantic City.

Rules Governing the Members of the Iowa State Medical Society with Reference to the Defence Fund.

1. The object and purpose of maintaining a Defense Fund is not to aid in defeating any just claim which any person may have against any member of this Society for malpractice. The Society recognizes that sometimes mistakes may occur with the most careful and skillful physicians and surgeons, and the Society, through its committee, will use all just and honorable means to bring about a fair settlement of any such cases. The necessity of maintaining such fund arises out of the fact that nine-tenths of the suits brought against doctors for alleged malpractice are little less than blackmail. Experience shows that the great majority of such cases are brought without any purpose of prosecuting them to judg-

ment, but only with the view of forcing the doctor to settle rather than to go to the expense and publicity of a trial.

Every member of the Society is interested in such litigation because every dollar that is paid upon unjust claims in settlement thereof is encouragement for further attempts to extort money by such methods. In the organization of the Defense Fund it is the purpose of the Society to aid its members in defending against these attempts at extortion. The expense of making a proper defense is a burden to many members of the Society, and inasmuch as all are interested in defeating unjust claims, it is no more than just that all members should contribute to aid in such defense.

2. It is not intended that the benefits of the Defense Fund shall be available for the purpose of aiding in controversies over bills for services, and in case an action is brought by a doctor to recover for his services and the defendant simply sets up a counter-claim to the extent of the bill or for the purpose of defeating the bill, asking no affirmative judgment beyond the amount of the bill, such doctor shall not be entitled to the benefits of the Defense Fund. Where, however, an action is commenced upon a bill and a counter-claim is filed for malpractice, or an independent action is filed for malpractice in which the patient claims a judgment against the doctor in excess of the amount of the bill, then in such case the doctor is entitled to the benefits of the Defense Fund the same as if no action had been brought by him.

3. Experience shows that many malpractice suits arise out of a controversy over bills for services. For this reason it is the judgment of the committee that in all cases where there is any serious controversy about a bill for service the doctor ought to submit the matter to the attorneys for the association before commencing suit upon the bill. The purpose of such submission is not that they shall render any service toward the collection of the bill, but that from experience in such matters they make suggestions with reference thereto which may avoid litigation and prevent the commencement of an action for malpractice.

4. Whenever an action is commenced or threatened, the doctor should write to the attorney for the Association—making a full fair statement of the facts so that they may advise the doctor at as early a time as possible with reference to the action of the threatened action. In many cases advice may be given which will avoid litigation.

5. In all cases where a notice is served upon a member of the Society of a suit or contemplated suit, the same should be sent FORTHWITH to the attorneys for the Association, in order that no disadvantage may result from delay.

6. Members will understand in the commencement of any action in the District Court a notice is served at least ten (10) days before the term for which suit is brought, and that this gives plenty of time to communicate with the attorneys for the Association so that rights may be fully protected.

7. In connection with any notice so sent to the attorneys, the members should send at the earliest possible date a full statement of the facts pertaining to the case. The attorneys will communicate with the committee with reference to such statement of facts, and the committee will render such service as is possible, both to the attorneys and to the doctor.

8. While in most cases which actually come to trial it will be necessary to have local counsel to co-operate with the attorneys for the Association, such local counsel should not be employed until after communicating with the attorneys for the Association. In many cases the cases will be dismissed or otherwise disposed of without trial, so that the expense of local counsel may be avoided.

9. It is of the utmost importance that members of the Association shall be guided by the foregoing rules, and IT IS HEREBY EXPRESSLY DECLARED that where the member of the Association does not comply with the foregoing rules he shall not be entitled to the benefits of the Defense Fund, unless upon proper showing to the Medical Defense Committee satisfactory excuse for not complying with the rules is established.

10. The Association will pay for the services of local counsel, provided they are employed under the direction of the regular attorneys for the Association, and not otherwise.

11. The Association will not pay court costs or any judgment or other expense of its members.

12. Address all communications about cases to Wade, Dutcher & Davis, Iowa City, Iowa.

13. Members should carefully read these rules, because they must be strictly observed to obtain the benefits provided.

Members of the Committee. D. S. Fairchild, Chairman; L. W. Littig, Secretary; Lewis Schooler; M. J. Wade, Attorney for the Society.

HOUSE OF DELEGATES
IOWA STATE MEDICAL SOCIETY

Sixty-Third Annual Session.

Sioux City, May 13-14-15, 1914.

First meeting, Wednesday, May 13th, 1914.

The House of Delegates of the Iowa State Medical Society held its first meeting in the Assembly room of The Martin Hotel, being called to order by the President, Dr. L. W. Dean.

The Roll was called showing the presence of fifty-seven members.

Dr. Wm. Jepson, on behalf of the Committee on Arrangements, presented Dr. Dean with a gavel, which was accepted by President Dean in a brief response, expressing his appreciation.

The Secretary read his Annual report, which was upon motion approved and ordered filed.

Secretary's Report.

Your Secretary begs leave to submit the following report. The total number of members for 1913 was 2019, for 1912, 2000. This membership is gratifying because 1913 was the year that the dues were increased from $3.00 to $4.00, and your Secretary feels that to show even a slight increase is a matter for congratulation. The number of members to date for this year is 1831.

The following county societies have not reported officers for this year.

Buena Vista, Delaware, Fayette, Hamilton, Jackson.

Buena Vista County has remitted the dues for four members for this year. Delaware County, two; Fayette County, one; Hancock County, two; Mitchell four; Winnebago, four.

Clarke and Clayton Counties had their charters revoked last year, and both have been reorganized, and have their applications on file for new charters. Clayton County was reorganized immediately after the annual session last year, and has fourteen charter members. Dr. Throckmorton reports the reorganization of Clarke County, with ten charter members. I recommend that charters be granted to these two

societies, and their Delegates be seated. In compliance with a motion which was adopted by the last House of Delegates, a charter has been issued to the Palo Alto County Society. At the present time, every county in the state has a more or less active organization, there being one Society composed of two counties, Dallas-Guthrie. During the past year, in different parts of the state, there have been combined meetings of two or more county societies. Your Secretary was privileged to attend two of these, and he desires to express the opinion that this is a question which many of the less populous counties would do well to adopt.

The following orders have been issued since my last report:

No. 522—Dr. T. M. Throckmorton, Councilor Expenses	$ 5.00
No. 523—Dr. G. C. Moorhead, Councilor Expenses	7.50
No. 524—Dr. J. W. Cokenower, Councilor Expenses	5.00
No. 525—Dr. Ira K. Gardner, Councilor Expenses	2.60
No. 526—Dr. C. A. Boice, Councilor Expenses	18.35
No. 527—Dr. Thos. F. Duhigg, Com. Public Policy and Legislation	46.55
No. 528—Dr. C. A. Boice, Assistant Editor and Advertising Manager	54.60
No. 529—Woodford & Ainsworth, programs and badges	37.00
No. 530—Dr. J. W. Osborn, Salary and Expenses	745.03
No. 531—Plymouth Cong. Church, Rent of church for 1913 meeting	75.00
No. 532—Dr. G. E. Crawford, Councilor Expenses	3.80
No. 533—Dr. H. C. Eschbach, Councilor Expenses	2.75
No. 534—Dr. W. B. Small, Salary and Expenses	194.95
No. 535—Dr. Thos. F. Duhigg, Registrars, Placards and banners, Lantern & Operator & Ice	41.15
No. 536—Washington Co. Press, Journal for May, cuts and expenses on cuts	210.76
No. 537—Blaise & Blaise, To reporting Session and Transcribing proceedings and Etc., Annual Session, 1913	83.60
No. 538—The Press Co., The Journal, June 1913	206.31
No. 539—Dr. D. S. Fairchild, Editor's Salary, April, May, and June, 1913	375.00
No. 540—Dr. H. G. Langworthy, Expense Com. on Contract and Lodge practice	6.25
No. 541—Wade, Dutcher & Davis, Medico-Legal Services, April, May, June, 1913	368.53
No. 542—Dr. J. W. Osborn, Salary and Expenses	198.13
No. 543—The Press Co., July and August 1913 issues of the Journal	361.62
No. 544—The Press Co., September 1913 Journal	180.81
No. 545—Dr. D. S. Fairchild, Editor's Salary, July, August, and September, 1913	375.00
No. 546—Wade, Dutcher & Davis, Medico-Legal Expenses, July, August and September, 1913 as per bill of October 1st, 1913	371.40
No. 547—The Press Co., October and November, 1913 Journal	300.32
No. 548—A. E. Cook, Malvern, Iowa, Medico-Legal services as per bill October 1st, 1913	20.00
No. 549—The Press Co., December, 1913 Journal	181.36
No. 550—Dr. J. W. Osborn, 2nd Quarter's Salary and Expenses	186.95
No. 551—Dr. C. A. Boice, Com. on Advertising	255.92
No. 552—Wade, Dutcher & Davis, Medico- Legal services October, November and December, 1913	928.98

No. 553—Dr. D. S. Fairchild, Editor's Salary, October, November, December, 1913 ..... 375.00
No. 554—The Press Co., January, 1914 Journal 151.66
No. 555—The Press Co., February, 1914 Journal 203.98
No. 556—H. F. Wagner, of Wagner and Updegraff, Medico-Legal services 320.50
No. 557—Dr. D. S. Fairchild, Editor's Salary, January, February, March, 1914 ..... 375.00
No. 558—The Press Co., March, 1914 Journal 197.36
No. 559—Wolfe & Wolfe, Medico-Legal services 87.95
No. 560—Wade, Dutcher & Davis, Medico-Legal services January 3, April 1st, 1914 ..... 618.36

A curious defect in our By-Laws has come to our attention this year. Except for the President and Editor, there is no provision for filling any vacancy that may arise from any cause, between the Annual Sessions. The Committee on Constitution and By-Laws, has this matter under consideration, and will no doubt propose a remedy.

The post office authorities have changed the ruling in regard to the Journal, so that where not more than one-half the dues are used for Journal expenses, it need not be optional. There never has been any rule in the By-Laws that it should be optional, but it was made so by the Trustees in order to comply with the post office requirements.

When planning for the collection of the 1914 dues, I conferred with the Trustees as to our attitude on this subject this year, and we agreed that I should accept dues without the Journal, subject to approval by the House of Delegates. Your Secretary would like some action by this body, on this subject, and he ventures to recommend that a resolution be adopted approving the joint action of the Trustees, and the Secretary for 1914, and instructing the Secretary that hereafter the Journal shall be obligatory.

Your Secretary would also like an expression from this body as to whether members who are received by transfer from other states with the payment of no dues, are entitled to the Journal and to Medico-Legal defense.

Upon motion of Dr. W. B. Small, seconded by Dr. H. C. Eschbach, new charters were granted to the counties of Clayton and Clarke.

The report of the Treasurer was read by Dr. Small, and upon motion of Dr. Eschbach, was referred to the Finance Committee.

Treasurer's Report.

Mr. President and Members House of Delegates of the Iowa State Medical Society:

Your Treasurer begs leave to submit the following report for the year, May 1st, 1913, to May 1st, 1914.

1913.

May 1st, Balance on hand	$4456.56	
May 15th, Order No. 522, T. M. Throckmorton, Councilor Expenses		$ 5.00
May 15th, Order No. 523, G. C. Moorehead, Councilor Expenses		7.50
May 15th, Order No. 524, J. W. Cokenower, Councilor Expenses		5.00
May 15th, Order No. 525, Ira K. Gardner, Councilor Expenses		2.60

May 15th, Order No. 526, C. A. Boice, Councilor Expenses	18.35
May 15th, Order No. 527, Thos. F. Duhigg, Com. on Public Policy and Legislation	46.55
May 15th, Order No. 528, C. A. Boice, Expenses Asst. Editor and Advertising Manager	54.60
May 15th, Order No. 529, Woodford and Ainsworth, Programs and Badges	37.00
May 15th, Order No. 530, J. W. Osborn, Sec'y Salary and Expenses for year	745.03
May 15th, Order No. 531, Plymouth Cong. Church, Rent for meeting of 1913	75.00
May 15th, Order No. 532, G. E. Crawford, Councilor Expenses	3.80
May 15th, Order No. 533, H. C. Eschbach, Councilor Expenses	2.75
May 15th, Order No. 534, W. B. Small, Treas. Salary and Expenses	194.95
May 16th, The Press Co., Washington, Iowa, Printing Journal for April	260.36
June 3rd, Order No. 535, Thos. F. Duhigg, Registrars, Placards, Banners, Lantern, Operator & Ice	41.15
June 30th, Order No. 536, The Press Co., Washington, Ia., Printing Journal for May, cuts and expenses	210.60
July 22nd, Order No. 537, Blaise & Blaise, Reporting Session Transcribing Proceedings, etc.	83.60
August 1st, Order No. 538, The Press Co., Washington, Ia., Printing Journal for June	206.31
September 10th, Order No. 539, D. S. Fairchild, Editor's Salary for April, May and June	375.00
September 10th, Order No. 540, H. G. Langworthy, Expenses Com. on Contract and Lodge Practice	6.25
September 10th, Order No. 541, Wade, Dutcher & Davis, Medico-Legal Services for April, May and June	368.53
September 20th, Order No. 542, J. W. Osborn, Sec'y. Salary and Expenses for quarter	198.13
September 26th, Order No. 543, The Press Co., Washington, Ia., Printing Journal for July and August	361.62
October 21st, Order No. 544, The Press Co., Washington, Ia., Printing Journal for September	180.81
October 21st, Order No. 545, D. S. Fairchild, Editor, Salary for July, August and September	375.00
November 6th, Order No. 546, Wade Dutcher & Davis Medico-Legal services for July August and September	371.40
Dec. 15th, Order No. 547, The Press Co., Washington, Ia., printing Journal for October and November	300.32
1914.	
January 7th, Order No. 548, A. E. Cook, Medico-Legal services	20.00
January 9th, Order No. 549, The Press Co., Washington, Ia., printing Journal for December	181.36
January 14th, Order No. 550, J. W. Osborn, Sec'y and Expenses 2nd quarter	186.95
January 14th, Order No. 551, C. A. Boice, Commission	

on Advertising secured		255.92
February 7th, Order No. 552, Wade, Dutcher & Davis, Medico-Legal services for October, November and December		928.98
February 11th, Order No. 553, D. S. Fairchild, Editor Salary for October, November and December		375.00
February 24th, Order No. 554, The Press Co., Washington, Ia., printing Journal for January		151.66
March 10th, Order No. 555, The Press Co., Washington, Iowa, printing Journal for February		203.98
March 10th, Order No. 556, H. P. Wagner, Medico-Legal Services		320.00
April 14th, Order No. 557, D. S. Fairchild, Editor, Salary for January, February and March		375.00
April 24th, Order No. 558, The Press Co., Washington, Ia., Journal for March		197.36
April 29th, Order No. 559, Wolfe & Wolfe, Medico-Legal services		87.95
April 29th, Order No. 560, Wade, Dutcher & Davis, Medico-Legal services for January, February and March		618.36
May 15th, Wm. Jepson by donation,	$ 10.00	
April 18th, P. B. McLaughlin, by fee exhibit space, Sioux City meeting	25.00	
April 30th, Interest for the year	109.78	
April 30th, D. S. Fairchild, Editor, by receipts of Journal	793.42	
April 30th, Membership dues for the year	7607.64	
April 30th, Disbursements for the year		8439.89
April 30th, Balance on hand		4562.52
	$13002.41	$13002.41

Journal Statement.

Monies received from D. S. Fairchild, Editor Journal from May 1st, 1913, to May 1st, 1914	$ 793.42	
May 1, 1913, to May 1, 1914 Subscription receipts	1859.00	
Expenses of Journal from May 1, 1913 to May 1, 1914		3804.70
Difference between receipts and expenditures	1152.28	
	$3804.70	$3804.70

Medico-Legal Fund Statement.

May 1st, 1913, Overdraft		$ 378.82
Medico-Legal expenses from May 1st, 1913, to May 1st 1914		2715.22
Medico-Legal Fund receipts from May 1st, 1913 to May 1st 1914	3832.00	
May 1st, 1914, balance on hand		737.96
	$3832.00	$3832.00

To whom it may concern:

I hereby certify that there is $4,562.52 on deposit in the Black Hawk National Bank in Waterloo, Iowa, to the credit of W. B. Small, Treasurer of the Iowa Statte Medical Society.

H. E. RUGG,
Asst. Cashier.

The report of the Council was read by Dr. Boice, and upon motion of Dr. Osborn was received and placed on file.

Report of the Council.

First District, C. A. Boice, Councilor:

Seven counties in this district report 121 members, with an eligible list of 220. Interest is reported good in two counties, fair in three, poor in two. Louisa county seems to be unable to get together and stay.

Second District, D. N. Loose, Councilor:

Five counties report 150 members, with 194 eligible. Average attendance of all 86. Three counties report good interest, one fair and one increasing.

Fourth District, Paul E. Gardner, acting Councilor:

Ten counties report 120 members, with 183 eligible, and an average attendance of 51. Two counties report good interest, four fair, four poor.

Fifth District, G. E. Crawford, Councilor:

Seven counties report 193 members, with 279 eligible. Average attendance 128. Lynn county reports 77 members, and an average attendance of 85. In this county the interest is excellent. The other counties report poor interest.

Sixth District, H. C. Eschbach, Councilor:

Seven counties report 155 members, with 222 eligible. Average attendance, 74. Interest is reported good in two counties, fair in five.

Seventh District, J. W. Cokenower, Councilor:

All together, conditions are improved over previous years. Interest extra good in two counties, good in two, better in one, poor in one. Five counties, Madison, Marion, Polk, Story and Warren, report 214 members. Dallas county reports with Guthrie county in the Ninth District.

Eighth District, T. M. Throckmorton, Councilor:

Ten counties report 148 members, with 246 eligibles. Interest is good in seven counties, fair in two, poor in one.

Ninth District, A. L. Brooks, Councilor.

Six counties in this district report 109 members, with 149 eligibles. Interest good in two counties, fair in the balance.

Tenth District, M. J. Kenefick, Councilor.

Twelve counties reporting with an eligible list of 261, with a present membership of 178, and an average attendance altogether of 113. Interest is reported good in four counties, and fair in the other eight.

Eleventh District, G. C. Moorehead, Councilor.

The condition of the district this year is fairly satisfactory. Of the counties reporting, there are 192 eligible physicians, of these 132 were members last year. There has been a net increase of five, making the present membership 137. These societies have arranged four meetings a year, with an average attendance of seven at each meeting. But two deaths are reported. The reports show but little interest manifested at Society meetings, in nearly all the counties. Last fall I attended meetings at Rock Rapids, and Cherokee. Both these meetings were well attended, and reports and papers of much scientific interest were presented showing that there is no lack of ability to furnish instruction and entertain-

ment. The one thing that seems to deaden interest, in Society work, is the strenuous work demanded by the public to maintain better offices, supply new equipment, and meet the general increase cost of doing business.

Summary.

The report of all the districts except the Third shows an eligible list of 2163, with a present membership of 1594. Conditions in general vary but little from reports of former years. The Council again calls general attention to the often proven fact that as is the Secretary, so is the Society. Practically always is it the case where the Secretary is alive to his responsibilities and opportunities, the Society is interested and the meeting instructive. Many Societies have the bad custom of rotating officers every year. Others fail to oust the Secretary who has proven neglectful. A good Secretary, when found, should be sentenced to his term of office for life.

Dr. Boice next read the report on Necrology.

Necrology report 1913-1914.

Since May 1st, 1913, the deaths of the following members of the Iowa State Medical Society have been reported to the Committee on Necrology.

Dr. T. H. Heffernan, Dubuque, ...May 7th, 1913.
Dr. A. L. Wright, Carroll, ...July 19th, 1913.
Dr. Ira K. Gardner, New Hampton, ...November 4th, 1913.
Dr. Lyman Hall, Springhill, ...December 4th, 1913.
Dr. W. W. Kerlin, Storm Lake, ...December 10th, 1913.
Dr. W. J. Bradley, Cedar Rapids, ...October 2nd, 1913.
Dr. E. M. Heflin, Calmar, ...December 20th, 1913.
Dr. E. C. Stanley, Des Moines, ...January 2, 1913.
*Dr. S. S. Lytle, Iowa City, ...November 8th, 1913.
Dr. P. M. Jewell, Decorah, ...January 8th, 1914.
Dr. E. W. Pahl, Cantril, ...March 27th, 1914.
Dr. J. D. McCleary, Indianola, ...April 2nd, 1914.
Dr. R. L. Cleaves, Cherokee, ...April 12th, 1914.
Dr. E. C. McMeel, Delmar, ...April 22nd, 1914.
Dr. J. C. Jordan, Des Moines, ...June 9th, 1913.
Dr. Samuel C. Durkle, Glidden, ...Sept. 11, 1913.
Dr. Chas. Enfield, Jefferson, ...May 7, 1914.
Dr. Charles E. Keeler, Lake Mills, ... 1913.
Dr. Thomas J. Dower, Fonda, ...March 3, 1914.

* Not a member at time of death.

The report of the Medico-Legal Committee was presented by Dr. Fairchild, and upon motion of Dr. J. W. Osborn was received, and placed on file.

Report of Medico-Legal Committee.

Condensed Report of Cases Against Members of the Iowa State Medical Society.

To Dr. D. S. Fairchild, Dr. L. W. Littig and Dr. A. L. Wright, Medical Defense Committee.

Gentlemen:

We have submitted a full report upon all cases pending at the date of our last report and also of cases commenced since that date.

The following is a summary of certain particulars in all cases commenced since the establishment of the Medical Defense Department of the Association.

Cases commenced since organization of department	75
Cases commenced prior to the report of 1909	15
Cases commenced during 1909-10	13
Cases commenced during 1910-11	10
Cases commenced during 1911-12	14
Cases commenced during 1912-13	13
Cases commenced during 1913-14	10
Cases pending at date of 1909 report	7
Cases pending at date of 1910 report	10
Cases pending at date of 1911 report	14
Cases pending at date of 1912 report	25
Cases pending at date of 1913 report	26
Cases now pending	21
Total cases disposed of	54

Nature of Cases.

Malpractice in removing seed wart	1
Malpractice in not discovering and uniting severed ligaments of the wrist	1
Alleged assault	2
Removal of cancer of the hand	1
Conspiracy to have plaintiff declared insane	1
Fracture of arm	13
Fracture of leg	22
Appendicitis—sponge case	1
Operation for kidney—sponge case	1
Appendicitis—malpractice in operation	1
Appendicitis—exploratory opening	1
Childbirth, alleged failure to attend after alleged agreement to do so; child died (separate action by father and mother)	2
Hand crushed, alleged improper treatment	1
Eye, alleged improper treatment	1
Infection, childbirth	2
Medical treatment of child	1
Abortion, improper after-treatment	3
Stomach trouble, alleged improper treatment and failure to treat	1
Anesthetic, death under	1
Improper diagnosis of diphtheria	1
Improper diagnosis of broken ribs	1
Removal of uterus, alleged negligent incision of the bladder	1
X-ray burn	2
Infection following amputation	1
Alleged improper treatment of scald	1
Removal of adenoids	2
Alleged improper abdominal incision	2
Failure to administer serum, patient died of lock jaw	1
Fracture of collar bone	1
Willful insertion of instrument, producing abortion	1
Operation for pregnancy of fallopian tube	1
Negligent administration of poison, causing death	1

Total amount of damages in all cases to date $788,466.00.

Judgments recovered against members, 1.

Aggregate amount of judgments, $1100.00.

Consultation on cases threatened in which no proceedings were had, 47.

Iowa City, Iowa, May 4, 1914.

Cases Disposed of. April 1, 1913 to April 1, 1914.

Case No. 54. This was a case of fracture of the thigh with deformity on account of extension being taken off without the understanding between defendant and plaintiff being witnessed by disinterested persons. This case was tried and a verdict given plaintiff to the amount of $1100.00. This was appealed and arrangements for a new trial were perfected when the case was settled out of court.

Legal expenses in this case, not including transcript for the appeal, $1131.34.

Case No. 60. This was a case of alleged fracture of the neck of femur and union with some deformity. The case was submitted to a jury, and the jury returned a verdict for the defendant. Legal expenses in this case, $1056.83.

Case No. 69. This was a suit for burns received by an epileptic and claimed to have healed slowly on account of the Doctor's unskillful treatment. Dr. Parsons brought suit to collect a bill against Del Harris who made a counterclaim, asking for $5000.00 for malpractice. The trial of this case was put off and finally the case was dismissed. Legal expenses in this case $20.00.

Case No. 7. In this case (sponge case) tried at Avoca, in the first trial jury disagreed, in the second trial a juryman was taken sick, and in the third trial a verdict was directed for the defendant. Legal expenses in this case $1351.67.

Case No. 57. This case grew out of a suit instituted by Dr. Dorsey to collect a bill for services rendered one John T. Legg. A counterclaim for malpractice was instituted. The case was finally transferred from the District Court in Missouri, where services were obtained against Dr. Dorsey, to the Federal Court. We prepared for trial and it was assigned for May 26th, 1913. Our attorneys appeared, and the case was dismissed. Legal expenses in this case $273.10.

Case No. 78. This case is a suit for $10,000. The plaintiff claimed that the defendant, had carelessly, negligently, and unskillfully performed an operation on said plaintiff, and as a result of said operation, removed one ovary from said plaintiff's body; that in truth, the patient was not suffering from pregnancy of the fallopian tube, and that said operation on said plaintiff was wholly unnecessary, and that the same was the result of gross negligence and lack of professional skill on the part of the said defendant, and that as a result of said operation plaintiff had suffered great pain and mental anguish, etc. In short, this was a claim based upon an alleged agreement to operate for pregnancy of the fallopian tube, and that without the consent of the patient, the Doctor at the same time removed the appendix. When the case was called the attorney for the plaintiff dismissed without prejudice. We have received no notice of suit being commenced over again. Legal expenses in this case $62.29.

Case No. 74. In this case it was alleged that through the negligence of the Doctor to administer antitetanus antitoxin, the patient died of tetanus. A motion to direct a verdict was entertained, and the plaintiff's attorney dismissed without prejudice, and the Statute of Limitations has to run on to May 11th of this year. No notice of commencing the case

over again has been served. (Since writing the above, suit has been commenced over again.) Legal expenses in this case $249.81.

Case No. 92. This case was refused on the ground that the suit was a counterclaim made against Dr. Rinker who sued for his bill after the Statute of Limitations expired, and therefore he was not subject to the dangers of a verdict for malpractice. This was in fact merely a counterclaim as an offset against a bill for services, and the committee could not take any action, as this would be part of an effort to collect a bill.

Case No. 52. This case was tried in the district court and a verdict rendered for the plaintiff. The case was appealed by us to the supreme court where it was reversed on its merits, and thereupon plaintiff dismissed the case and also the case of Reuben E. Adams vs. E. C. Junger. Expenses in this case $905.74.

Case No. 56. This case was a claim for $1500 damages on account of alleged unskillful and unprofessional treatment of the middle finger of plaintiff's right hand. This action was finally dismissed by the plaintiff, and the statute of limitations having run, the case is finally disposed of. Legal expenses in this case $10.00.

Case No. 72. This is a claim for damages on account of alleged unskillfulness in the treatment of a Colles' fracture. The plaintiff complained that the wrist joint was stiff and gave her a great deal of pain, etc. The case was tried in the Polk county district court, and as the plaintiff's evidence was in, we made a motion for a directed verdict whereupon plaintiff dismissed suit. The plaintiff then began suit over again and was assigned for trial Feb. 1914. Our attorneys were ready for trial and the plaintiff was not. There is only a possibility of suit being brought a third time. The defendant in this case carried insurance with the Fort Wayne Defense Company, which paid the fees of the local attorney. Expenses to the Society in this case $17.50.

Case No. 73. This is a case of fracture of middle third of femur, caused by the kick of a horse. The case was assigned for trial in Missouri. Our attorneys appeared and the court sustained a motion on the question of the statute of limitations, and a verdict was rendered against plaintiff for costs. The plaintiff's attorneys have threatened to appeal but no appeal has yet been taken. Our attorneys are of the opinion that the supreme court would probably reverse the lower court, so we are not certain that this case is finally disposed of. Legal expenses in this case $515.08.

Case No. 81. This action was brought in the ditrict court of Fremont county for January term 1913. It involves the treatment of a fracture of tibia and fibula. The plaintiff sustained a fracture in April 1912. It is claimed that the right foot of the plaintiff is now deformed so that he steps on the side of the foot. This case has several times been assigned for trial and has finally been dismissed, and the dismissal is final. No expenses have been incurred in this case unless it may be for local attorney, but no bill has yet appeared.

The amount of money expended during the fiscal year, (Apr. 1st, 1913 to Apr. 1st, 1914.)	$3,095.72
Amount paid Wade, Dutcher & Davis	2,587.27
Amount paid local attorneys	508.45.

The report of the Committee on Constitution and By-Laws, was read by Dr. Emmert, Chairman, and upon motion of Dr. Schooler, was laid over until the next meeting of the House of Delegates.

The report of the Committee on Medical Education being called for, Dr. Littig stated that the report which he would present had been approved by all four members of the committee present, having been considered by them section by section, but that the report was only signed by two members of the committee. President Dean questioned the propriety of presenting a report in such condition, and after considerable discussion the report was upon motion referred back to the committee for signature of all members, to be presented at the next session of the House of Delegates.

The report of the committee on Public Health and Education was presented by Dr. Voldeng, and upon motion of Dr. J. W. Osborn was accepted and placed on file.

Report of the Committee on Public Health Education.

Your committee on Public Health Education authorized by the 1913 House of Delegates begs leave to submit the following report:

The committee held its first meeting in Des Moines, August 31, 1913, where the members were pleasantly entertained by Dr. Lenna L. Means.

The committee held its second and last meeting during the year, December 15, 1913, all members were present and participated.

At its first meeting the committee decided to divide the state into five health districts, each district to be in charge of one of its members. Through the efforts of different members of the committee, ninety-five health meetings have been held throughout the state during the year. The committee is indebted to the Iowa Federation of Women's Clubs for hearty and efficient co-operation. The committee is satisfied from its experience that it was a wise move on the part of the committee to solicit and obtain such co-operation on the part of the Iowa Federation of Women's Clubs and the committee furthermore feels that much credit is due this organization for work accomplished during the year. Generally speaking the County Medical Societies have been in sympathy with and materially assisted in the work. It is the opinion of the committee that without the hearty co-operation of the County Medical Societies this work can not be made to yield the result it should. The same is true of the co-operation of the Iowa Federation of Women's Clubs. The various commercial organizations as well as many of the churches have materially assisted the Committee in its work during the year.

The committee at its last meeting unanimously adopted the following recommendations to be submitted to the House of Delegates at this time: First, that the name of the committee be changed from that of "Committee on Public Health Education' to "Committee on Health and Public Instruction". This change is also recommended by the Council on Health and Public Instruction of the American Medical Association. Second: that the committee be made a standing committee and its members appointed in the same way as is now the rule in the case of other standing committees. Third: that at least one member of this committee be a woman.

Dr. Voldeng on behalf of the committee further offered certain amendments to the Constitution and By-Laws, which were referred to the committee on Constitution and By-Laws.

The report of the Library Committee was presented by Dr. W. W. Pearson chairman. Upon motion of Dr. Small, seconded by Dr. Voldeng, the report was accepted, the committee continued, and instructed to sign the agreement with the Library Committee of the State.

Report of the Library Committee.

Your Library Committee desires to submit the following correspondence, which is self explanatory, and a copy of the proposed agreement between the Iowa State Medical Society and the State of Iowa for the benefit of the State Library and the Historical Department.

Mr. Johnson Brigham, Librarian of the State of Iowa,
Des Moines, Iowa.

My Dear Sir:—

We, the members of the Library Committee of the Iowa State Medical Society, wish to submit for your consideration the following statements.

At the annual meeting of the Iowa State Medical Society held in Des Moines, in May 1913, having in view the establishment of a medical library in the State of Iowa, the following action was taken:—

"Dr. Boice moved that a committee of three be appointed by the president to confer with the State Librarian for the purpose of establishing a State Medical Library. Motion seconded and carried." Drs. W. W. Pearson, Des Moines,; J. W. Harrison, Guthrie Center; and H. C. Eschbach, Albia, were therefore appointed as the Library Committee.

On February 5th, 1913, the Trustees of Drake University decided to discontinue the Medical College connected therewith. At an executive committee meeting of the same date, President Bell was given the power to take whatever steps should be necessary toward the closing of the School. With this authority, President Bell transferred to Dean W. W. Pearson, whatever books of a technical character, including the bound magazines, that were in the Medical Library.

Whereas Dr. Pearson desires to give these books as a nucleus for a Medical Section of the State Library; and

Whereas, Dr. E. E. Dorr, who owned several hundred volumes in the Drake Medical Library wishes to contribute these and other volumes to the Medical Section of the State Library; and

Whereas some 1300 medical books have already been delivered at the State Library; and

Whereas Dr. Gershom H. Hill has also contributed hundreds of medical books from his own private library to the State Library; and

Whereas many physicians in Iowa will gladly assist, in this manner and otherwise, in collecting suitable books for a large and comprehensive State Medical Library;

Therefore we, a committee from the Iowa State Medical Society, earnestly request that steps be taken to form a separate Medical Section of the State Library, and that provision be made for shelving the books in it so that they may be accessible and convenient for use.

Signed { W. W. Pearson,
J. W. Harrison,
H. C. Eschbach.

February 27th, 1914.

Dr. Gershom H. Hill,
Equitable Bldg.,
City,

My Dear Dr. Hill:—

Your letter of February 25th is received. I enclose copy of the minutes of the Board of Trustees of Drake University, under date of February 5, 1913, in which you will find the record of the discontinuance of the Medical and Dental Colleges of Drake University. I also give you the minutes of the Executive Committee of the Board of Trustees authorizing the President of the University to close up the affairs of the Medical and Dental Colleges by taking whatever steps might be necessary. With this

authority I transferred to Dean W. W. Pearson whatever books of a technical character, including the bound magazines, that might be in the Medical Library of Drake University. The greater number of the books, as I understand it, in this Medical Library, were the property of Dr. E. E. Dorr, and reverted to him when we closed the College of Medicine. Of the books in the Library the smaller portion aside from bound magazines belonged to Drake University, and the larger to Dr. Dorr. Whatever interest we had in the Library, was transferred to Dr. W. W. Pearson.

Very truly yours,
Hill M. Bell.

Meeting of the Board of Trustees, of Drake University, February 5, 1913.

The Board of Trustees met in the office of President Bell at 2:00 P. M. Those present were A. G. Downing, L. Higgins, B. F. Prunty, George A. Jewett, J. B. Burton, B. D. VanMeter, B. S. Denny, J. H. Stockman, C. S. Medbury, J. Mad. Williams, H. I. Prusia, H. M. Bell, J. B. White, and Dr. Chas. Smith.

The session was opened with prayer by Charles S. Medbury.

The minutes of the Board Meeting of January 15th, and of the Executive Committee Meeting of January 18th, were read and approved.

After the reading of communications from N. P. Colwell, Secretary of the Council of Medical Education of the American Medical Association, Deans Pearson and Smith of the Medical College and Chairman Shonts, President Bell recommended, and gave his reasons therefore, that steps be taken by the Executive Committee of the Board looking toward the discontinuance of the Medical and Dental Colleges at the end of the school year in June, 1913.

It was moved and carried that the President's recommendation be adopted. On motion the meeting adjourned.

Geo. A. Jewett, Sec'y.

The Executive Committee Meeting, February 5, 1913.

The Executive Committee of Drake University met at 3:30 P. M. in the President's office. Those present were B. F. Prunty, George A. Jewett, J. B. Burton, A. G. Downing, J. B. White, L. Higgins, and B. D. Van Meter.

Pursuant to the action taken by the Board at its meeting February 5th, referring to the Executive Committee the matter of discontinuing the Medical and Dental Colleges at the close of the present school year, it was moved and carried that the President be given authority to take whatever steps are necessary to carry out this action. Upon motion the Committee adjourned.

Geo. A. Jewett, Sec'y.

March 11, 1914.

Johnson Brigham,

Dear Sir:

The books I formerly placed in the Library of Drake Medical school, I am willing to give to the State Library as they have been returned to me.

I also have about 300 additional volumes now ready to place with those from the Drake Library, and will have others in the near future, which I will gladly give to the State Library.

Yours,

E. E. Dorr, M. D.

Dr. W. W. Pearson, Equitable Building, City, 5-12-14.

Dear Dr. Pearson:—

From a count of medical books and pamphlets now on the second floor of our State Library, awaiting the shelving ordered by the State—the same to be placed in a room set apart by our Library Board (for a collection of medical works exclusively) I find that the Polk County Medical Society by Dr. W. W. Pearson, has turned over to us for the purpose outlined above, 1334 bound volumes and about 600 pamphlets.

Also that Dr. Hill has turned over 155 medical works bound; also about 1000 pamphlets; also bound volumes 1 to 50 (v. 48 missing) of the Journal of the American Medical Association; and bound volumes 1 to 73 of Medical Record.

Dr. Dorr has also turned over 259 bound volumes and 14 unbound.

The present State Library collection of medical works, exclusive of those above mentioned, includes 1280 bound volumes and a few uncounted pamphlets. These altogether make a total of 3,150 bound volumes, 14 unbound volumes, and an estimated total of 1,600 pamphlets—a very good basis for the foundation of the proposed Medical Department of the State Library.

With the active cooperation of the State Medical Society, I see no reason why we should not in a few years build up a Medical Department which would be to your profession what our present Law Department is to the legal profession.

A prime essential to this end is a medical librarian, possessed not only of a knowledge of medicine and kindred sciences, and the languages in which scientists and practitioners express themselves, but shall also have an enthusiastic interest in the work. I now think I can find such a person, but of course, have nothing definite to offer until the State Medical Society commits itself to cooperation with the State.

I would suggest the appointment of a strong legislative committee to the end that a moderate appropriation be made for a librarian's salary and for the purchase of books recommended by the Society. I would also recommend the appointment of a Book Committee who will take the work seriously, giving time to the consideration of consistent purchases.

As a means to the desired end, would it not be well for the Society to engage such a librarian, paying her salary until relieved by the State? Such a course would have this advantage: it would show the members of the next General Assembly what the Society was doing, and what it hoped to do; and would put up to legislators the plain duty of the State to relieve the Society of financial burden, as it has relieved the legal profession of the State.

This last is a mere suggestion growing out of my desire to begin at once a work too long delayed.

Yours very truly,
Johnson Brigham.

CONTRACT.

Between Iowa State Medical Society and the State for the Benefit of the State Library and Historical Department.

This agreement made and entered into this.....day of February, A. D., 1914, by and between the Iowa State Medical Society of the State of Iowa by and through its committee, W. W. Pearson, J. W. Harrison, and H. C. Eschbach thereunto appointed, party of the first part, and the State of Iowa, for the use and benefit of the State Library and Historical Department, by and through H. E. Deemer and Johnson Brigham a com-

mittee of the said State Library and Historical Department thereunto appointed, party of the second part each of said committees having full power and authority from their respective parties to act in the premises,

Witnesseth:—

That Whereas, the said first party is the owner of a medical library composed of something like 1300 books which books are temporarily in the State Library and Historical Department of the State of Iowa, said books being duly catalogued, and listed in the card catalogue accompanying the same; which said library the said party of the first part desires to give to the State of Iowa for the use and benefit of the said State Library and Historical Department, and whereas, the party of the second part has a number of medical books, pamphlets, periodicals, etc., of its own and is desirous of establishing and maintaining a medical section or department of said library, and of combining the medical books, publications, etc., of the first party with its own to the end that said section may be established.

NOW THEREFORE, in virtue of the premises it is hereby agreed by and between the parties aforesaid in consideration of the mutual promises herein contained that the said party does hereby grant, give and present in perpetuity to the party of the second part, the aforesaid medical library with its card catalogues, etc., of the first party upon the following terms and conditions, and none other, towit:

First. The said gift and grant is to be absolute and irrevocable so long as the party of the second part complies with its promises and agreements herein contained.

Second. The said library of the party of the first part shall be received by the second party and installed in a room or rooms or gallery, in the building now used by the State Library and Historical Department or in such other building as may in the future be devoted to the use of the said State Library, properly shelved and classified and to be known as the medical section of the State Library and Historical Department.

Third. With the books so given the party of the second part agrees to combine books, periodicals, etc., now owned by it and such as it may acquire in the future to the end that such section may be strengthened and added to in the future as the need therefore may arise and the funds of the State Library may justify.

Fourth. For the present the party of the first part may place any one it may see fit, subject to the approval of the State Librarian in charge of the said medical section, to catalogue and classify and shelve the same and to attend to the wants of the users thereof. The expense of such help, if any, to be borne by the first party.

Fifth. The use of the books in said medical section shall at all times be open and free to the members of the Iowa State Medical Society and to all physicians and surgeons, not only of the State, but elsewhere under such reasonable rules and regulations as the State Librarian may from time to time establish.

Sixth. The State Library and Historical Department will set aside from its annual biennial appropriations, such a sum, as in the judgment of its Board of Trustees the entire amount of the appropriation will warrant, in view of the needs of the other sections or departments of the library, for the purpose of adding books, periodicals, etc., to the said medical section, and will endeavor to secure from the legislature the right to appoint a special assistant who shall have charge of the said medical section, such assistant if obtained and appointed, to be appointed by the State Librarian, upon recommendations from the Iowa State Medical So-

ciety, and the appointment approved by the Board of Trustees of the said State Library and Historical Department.

And on its behalf the State of Iowa hereby agrees to and does accept the aforesaid grant and gift and agrees to the terms thereof upon the following conditions additional to those just stated:

First. The second party shall not be responsible for the loss or destruction of any of the books, periodicals, etc., now given it by the party of the first part, but will house and shelve the same and use reasonable care in the preservation thereof.

Second. The second party does not obligate itself to either obtain or assign a special assistant to care for, catalogue, classify or have charge of the medical section, but will endeavor to secure such assistant from the legislature and failing in that, it will make such assignment from its own forces to the said section as its resources will justify, and will endeavor to keep all books added to said section properly accessioned, catalogued and classified and to make them usuable by those entitled to the benefits thereof.

Third. The party of the second part in making up its annual or biennial budget does not agree to assign any given amount thereof to the medical section; but will devote such part of the funds to this purpose as will give to said section a fair and equitable part thereof considering the needs of the other departments of the library.

Fourth. The party of the first part agrees that through a committee of its Society or otherwise it will at least twice a year recommend to the State Librarian a list of books, periodicals, etc., to be purchased and added to the said medical section, which list shall be subject to the approval of the State Librarian and of the Board of Trustees of the State Library and Historical Department, and the said second party will from such lists so approved make its purchases for said medical section. If no such lists shall be furnished by the first party, then the State Librarian will make his own selections and recommendations, subject to the approval of his Board of Trustees. The purpose and object of this condition is to secure the co-operation of all interested parties in keeping said medical section down to date and abreast of the times to the end that the medical profession may be as well served by the State Library as are the other professions of the State.

Fifth. The State Librarian will also endeavor to ally himself with other libraries and associations having medical libraries or sections, in such a manner as that he may obtain books, periodicals, etc., from such libraries for the use of the physicians and surgeons of the State without other charge than the transportation for the same and a reasonable fee for obtaining the use thereof, all such charges to be paid, by the person for whom such book, periodical or publication is obtained, and such applicant shall also be responsible for any loss or damage to the book or publication.

Sixth. The books and publications contained in said section shall be accurately and scientifically catalogued, classified and shelved so as to be made available to the patrons thereof as fast as the resources of the State Library will permit, and such classification shall, so far as possible, be kept down to date.

Seventh. The janitor work connected with said medical section shall be done by the party of the second part from the time of the acceptance of the books.

Eighth. The State Library and Historical Department will collaborate with the Iowa State Medical Society in securing adequate appropria-

tions for the medical section and sufficient help to properly administer the same; but makes no guaranty as to the amount of money to be set aside for addition to the section or as to the help necessary to administer it.

IN WITNESS WHEREOF, the parties aforesaid through their respective committees, hereunto suscribe their names being thereunto duly authorized by the said parties, this .....day of February, A. D., 1914.

Under the heading of new business, Dr. Pearson moved that the president be instructed to appoint a committee of three, as provided for in the above contract, for the selection of books, and periodicals for the development of the State Medical Library. Motion seconded and carried.

Upon motion, the House of Delegates thereupon adjourned to Thursday, May 14, 8:00 a. m., and the Delegates met in caucuses by Congressional Districts, to select members of the Nominating Committee which was reported as follows:

First District—C. P. Frantz.
Second District—W. H. Johnston.
Third District—T. U. McManus.
Fourth District—C. W. Duffin.
Fifth District—W. J. Morrison.
Sixth District—C. B. Taylor.
Seventh District—Lewis Schooler.
Eighth District—B. L. Eiker.
Ninth District—T. B. Morris.
Tenth District—W. W. Beam.
Eleventh District, M. N. Voldeng.

Thursday Morning Meeting, May 14th, 1914.

Meeting called to order in the ordinary of the West Hotel, at 8:00 A. M. by the President, L. W. Dean. Roll call showed the presence of fifty members.

Owing to the minutes of the previous meeting not having been transcribed, the reading of the same was passed.

The Secretary then moved that Dr. D. N. Loose, of Maquoketa, be considered Councilor of the Second Congressional District for the past year. Motion was seconded by Dr. Boice, and carried.

Dr. C. S. Kennedy, of Logan, Iowa, offered the following resolution; and moved its adoption: "Resolved, that the Harrison County Medical Society urge such action by the House of Delegates as will instruct the Committee on Public Policy and Legislation to keep the President and Secretary of each component county society promptly supplied with copies of all bills introduced affecting the medical profession."
Said resolution being seconded was put to vote and carried.

Dr. William Jepson then called up the matter of the amendment proposed by Dr. Dale of Sioux City, at the last meeting, of the House of Delegates held last year, and which under the rules had to lay over for one year, viz. "Amend chapter VIII. Sec. 8 of the By-Laws by inserting the words, Any member of this Society not wishing to avail himself of the aforesaid medical defense, is not required to pay his assessment, nor be party thereto. After discussion by Drs. Wm. Jepson, C. B. Taylor, Lewis Schooler, B. G. Dyer, G. N. Ryan, and B. L. Eiker, a motion was made and seconded that the resolution be indefinitely postponed. On request, the resolution was read by the Secretary, and motion to indefinitely postpone, carried.

The Secretary then presented a statement from Dr. Dorr, that he has an offer to sell his Journal to a private individual, but would prefer to

sell to the Society; that he would take $1,000.00 for his Journal, advertisements, subscription lists, files, and good will, money to be paid at rate of $100.00 per month. The Secretary moved that said offer be referred to the Trustees with power to act. Motion seconded by Dr. W. B. Small, and declared duly carried.

Motion made and seconded to adjourn until 5:00 P. M. carried.

Afternoon meeting of the House of Delegates, Thursday May 14th, 1914.

Meeting called to order by the President. Roll call showed the presence of 50 members.

Dr. W. B. Small moved the adoption of the amendment proposed by Dr. Rendleman at the last session of the House of Delegates, adding a new section to the Constitution, said new section to be known as Article VIII, section 4, as follows:

Sec. 4 That at the election of officers at the session of 1914, there be elected a president who shall enter upon the duties of his office at once, and also a President-elect who shall enter upon the duties of the Presidency one year later; thereafter, the President-elect shall enter upon the duties of the Presidency one year from the date of his election.

Upon inquiry by the President, it appeared that the Secretary had failed to send a notice to the various County Societies of this proposed change. Dr. Small suggested that as the proposed change had been published in the Journal, this would be a sufficient notice, but the president ruled that the notice was not sufficient, and that this amendment could not be acted upon at this time, but would have to lay over another year. Dr. Dyer appealed from the decision of the chair, said appeal being seconded by Dr. Fuller. The question of the appeal being put to vote, the chairman was sustained.

The following amendment having laid over one day, was called up by Dr. Voldeng: Add to section I of Chapter VIII, a new committee to be known as The Committee on Health & Public Instruction. Also, add a new section to Chapter VIII, of the By-Laws to be known as section 9, viz. "The Committee on Health & Public Instruction shall consist of three members. The term of service of each member shall be 3 years, provided that in the original organization of the Committee, the service shall be grouped by lot into three divisions, with terms expiring 1, 2, and 3 years respectively from the 1914 annual session. It is further provided that at least one member of the Committee shall be a woman."

On motion which was seconded, these amendments were declared duly adopted.

Dr. Max Emmert, Chairman of the Committee on Constitution and By-Laws, proposed the following amendments to the By-Laws, they having laid over one day: Add to Chapter VI, section 5 "They shall meet quarterly, the expenses of such meeting to be paid by the Society as provided for in section 4, Chapter IX of the By-Laws, but this shall not be construed to include their expenses in attending the annual session." Motion was duly made and seconded, and the amendment as proposed was declared adopted.

Add to Chapter VIII, Section I, a new committee to be known as "A Committee to receive and act upon resignations and to fill vacancies." And the following to be known as section 10, Chapter VIII. "The Committee to receive and act upon resignations, and to fill vacancies, shall consist of all the members of the council, whose duties it shall be to receive and act upon all resignations presented between the annual sessions, and to fill by appointment vacancies by reason of any causes, whatsoever, which may occur between the annual Sessions, which is not otherwise provided for."

On motion duly made and seconded, these amendments were declared adopted.

Amend Chapter XII, Sec. 11 by striking out this section and substituting in lieu of same the following; "At some meeting in advance of the annual session of this Society, each county society shall elect a delegate to represent it in the House of Delegates of this Society in the proportion of one delegate for each fifty members, and one for each major fraction thereof, but each County Society holding a charter from this Society, which has made its annual report and paid the assessments as provided in this Constitution and By-Laws, shall be entitled to one delegate".

On motion made and seconded, the amendment was declared adopted.

The next in order was the report of the Committee on Medical Education the same being presented by Dr. Littig, and being signed by three members. Dr. McManus then submitted a minority report signed by two members.

Report on Medical Education in Iowa, Submitted to the House of Delegates of the Iowa State Medical Society, Sioux City, May 13th, 1914.

To the House of Delegates, Iowa State Medical Society, Sioux City,

Your Committee to which was assigned the task of preparing a report on Medical Education in Iowa, attempts to fulfill its duty by submitting, first of all, the following record of attendance and graduation in the College of Medicine for ten years.

Year,	Attendance,	Graduation.
1903-1904.	234.	49.
1904-1905.	242.	65.
1905-1906.	227.	51.
1906-1907.	272.	52.
1907-1908.	266.	42.
1908-1909.	266.	41.
1909-1910.	190.	44.
1910-1911.	118.	24.
1911-1912.	110.	32.
1912-1913.	98.	16.
1913-1914.	109.	13.

There are registered in the College of Homeopathic Medicine during the present session, five students, making a total in the two Iowa Medical Schools of 114 students, of whom 94 give Iowa as their home state. There are 108 Iowans in 20 of the 72 other American Schools heard from. Ten years ago, 1903-1904, the following was the registration in all the medical schools of the State;

School.	Attendance.	Graduates.
College of Medicine, Iowa City,	234.	49.
College Homeopathic Medicine, Iowa City,	35.	9.
Keokuk,	267.	47.
Sioux City,	59.	12.
Drake University,	65.	13.
	660.	130.

or a grand total for the session of 1903-1904, in all the schools of the State, of 660 students, of whom 130 were graduates. Compared with the present registration in the two remaining schools, there is a falling off of 546 in attendance, and of 117 in the number of graduates assuming that the thirteen now in the senior class in University of Iowa will all graduate this year. The falling off in attendance in the State during the ten

years is 82 per cent, and in the number of graduates 90 per cent. During the same period, with an entire absence of intra-state competition, the attendance in the College of Medicine of the State University of Iowa has fallen off 53 per cent, and the number of graduates 73 per cent.

Comparing the falling off in attendance in Iowa with the falling off in attendance throughout the entire country, the following appears: In 1903-1904 there were 28,142 Medical students in the United States; at the present session there are 17,015,—a falling off in entire country of 39 per cent. In 1904 there were 5,747 graduates in all the schools of the United States; in 1913 there were 3,981 a falling off of 30 per cent. The lessening in the number of students and graduates in Iowa is a logical result of higher requirements. The committee is unable to report the falling off in other A plus Schools.

College of Homeopathic Medicine.

Taking up the College of Homeopathic Medicine of the State University, the committee reports that there are registered in this College for the current year, a total of five students, three of whom are freshmen, and two of whom are Seniors. At this date, there are but four students in this College, one of the Freshmen having been refused reregistration because of low standing at the end of first semester. There are no Sophomore and no Senior students in this College at the present time. From July 1, 1911 to June 30, 1912, the school being in session there were treated in the Homeopathic hospital 272 patients, of whom 29 were clinical surgical patients, 19 clinical gynecological or obstetric patients, 24 eye, ear, nose, and throat patients, 5 medical patients; or 77 clinical patients, and 195 private patients. During the same period there were treated in the out-patient department 6 clinical gynecological and obstetric cases, 52 clinical eye, ear, nose and throat, and 232 clinical medical cases. During the year July 1, 1912, to June 30th, 1913, the Homeopathic College not being in session during this period, there were treated in the Homeopathic hospital no clinical surgical patients, no clinical gynecological or obstetric no clinical eye,ear, nose, and throat patients, 8 clinical medical patients, and 221 private patients. During the same period there were treated in the homeopathic dispensary 112 cases, all medical. It should be stated that the report in the hands of the Committee does not indicate whether the dispensary record is of patients, or cases, or visits, but the hospital work is of patients. Thus we find that, during the two year period, from July 1, 1911 to June 30th, 1913, there were treated in the homeopathic hospital a total of 85 clinical patients, and 416 private patients, a remarkable record for a hospital supported by state funds for teaching purposes. Further comment is unnecessary.

The College of Medicine.

In its efforts to reach a presentable and fair conclusion as to the present condition of Medical education in Iowa, the committee wrote to all the graduates of this college of the classes of 1912 and 13, and to all the students that entered in 1908 and 1909, and that left Iowa before graduating. The response to these letters was generous, many of the writers, some of them graduates, complained bitterly of this or that department; others defended the school with all the ardor of a recent, first and only love.

The reasons given for completing their medical education elsewhere are many and various. While not necessarily subscribing to the reasons and sentiment expressed, the Committee presents them as follows:

(1). The clinical advantages of a larger center of population which

consist in the number, variety and quality of cases presented for clinical study.

(2). Instruction by one man in a department, or in a department dominated by one man, is necessarily narrow and gives a one man idea, while instruction by several leading men in one department broadens and results in a better judgment. As one writer states. "A copy cannot be better than the original; it is seldom as good, but a product designed from several patterns, making itself an original, may be as good or even better than any of the originals".

(3). Desire to study directly under the men that wrote the text books, and that are accepted as authorities of weight when quoted.

(4). Gross pathology is better taught in large centers because of the greater number of autopsies.

(5). A feeling that Eastern Graduates have more prestige with the laity, a feeling, as one writer states, fostered by the Board of Education in its selection of Eastern Graduates as teachers in the University.

Your Committee would like to offer the following as bearing on the subject matter at issue.

Dean Non-Resident.

The Committee feels that the Iowa City school has been seriously handicapped by the fact that the Dean is non-resident. Of all the men connected with a medical school, this officer ought to be on the ground. He must give the school the best that is in him, that he may encourage harmonious and co-operative effort in the faculty and in the students as a body. The Committee feels that the selection of a resident dean has been much too long deferred, and that satisfactory progress in the college of medicine is not possible until such action is taken.

Your Committee endorses the Carnegie Foundation report, which urges a strong resident faculty for Iowa City. The most important step in the assembling of a strong resident faculty is the selection of a strong resident dean.

The University Hospital.

A report prepared at the request of your Committee, and now a part of its files, shows 416 private patients admitted to the hospital from July 1st, 1911, to June 30th, 1912, and 512 private patients admitted from July 1, 1912, to June 30th, 1913, an increase in the total number of private patients of 96, showing that the hospital is being liberally patronized by private patients. The latest printed report does not show how many patients were private or how many were clinical. It does show 185 "unclassified" private cases, "unclassified" meaning that patients so reported were treated either by outside physicians, or did not properly belong to the department with which the attending physician is associated.

The Committee would suggest that the University Hospital should be used only for teaching purposes and that no private patients be received therein.

Department of Medicine.

In the department of Medicine, histories are well kept, cases carefully studied and the method of instruction is the best possible under the circumstances. The head of the department has a free office in the building where he receives his private patients, having the assistance of a hospital nurse whenever necessary, and also having the use of the hospital laboratory. Hospital beds are also available for private medical cases, but only when such patients are under the head of the department or his assistants.

The total number of medical patients in the hospital from July 1st, 1911, to June 30th, 1912, clinical and private, including cases of neurology, psychology, dermatology and pediatrics; also cases of ulcer of the leg, urethral stricture, chronic eustacheitis, and 7 cases of appendicitis, was 325. To this number must be added a total of 56 out patients, or a grand total of 381 medical cases in and out,—clinical and private, clinical patients only being available for teaching, but the exact number of which do not appear.

It should be mentioned that members of the Senior class in sections make a number of visits to the Oakdale Sanatorium, where they receive instruction in the diagnosis of early tuberculosis. This Sanatorium also provides a number of cases for the hospital clinics, all such cases being included in the reports of the respective clinics. Of the 325 clinical and private medical cases admitted during the year, July 1, 1911, to June 30th, 1912, but 51 (15 plus %) were discharged as well. This failure to cure medical patients is not a reflection on the therapeutic skill of the teachers, but it does emphasize the chronic nature of the cases studied.

Department of Surgery.

Recent changes in this department make a record rather difficult. Up to the close of the last school year it was customary for the student to assist at operations, a practice very popular with students, but now very generally and properly abandoned in the better medical schools, much more attention being given to diagnosis and pathology, and much less to operative technic. From July 1, 1911, to June 30th, 1912, 538 cases were treated in the department of surgery, including orthopedic and genito-urinary surgery. How many of these cases were private the report does not make clear. The clinical material was not sufficiently varied, consisting of an undue proportion of hernias and appendectomies, the frequent repetition of which became rather monotonous.

Department of Gynecology.

In the department of Gynecology, from July 1, 1911, to June 30th, 1912, there were treated 137 patients, and 102 from July 1, 1912 to June 30th, 1913, a falling off of 35, this being the only department in the school that does not show an increase in the number of patients treated. How many of these patients were private the Committee has been unable to learn.

There is no report of out-patients. In this department students assist at operations, but have only a very meager opportunity to make vaginal examinations, from 6 to 15 examinations during the student course being the average. The work in this department could be much improved.

Department of Obstetrics.

In the department of Obstetrics, from July 1, 1911, to June 30th, 1912, the second annual hospital report states that 144 patients were admitted, of whom 81 were adults, and 63 infants born in the hospital. The Committee finds that there is very general dissatisfaction with the manner in which this course is given, the head of the department giving the same little attention, assigning most of the work to assistants. The work in this department could also be very much improved.

Department of Ophthalmology and Otology, Rhinology, Laryngology and Brain Surgery.

This department enjoys a splendid equipment. The class is divided into three sections, each section spending 12 weeks of 2 hours each, or a

total of 24 hours as follows: One period of 12 weeks in witnessing or assisting at operations by the head of the department; one period of 12 weeks in ward observation, and one period of 12 weeks in diagnostic manipulations, and two hours each week devoted to lectures. In the way of material; during the period of July 1, 1911, to June 30th, 1912, the department cared for 879 patients, of which 533 were out patients; how many were private is not shown.

Clinical Material.

Summing up the material available for clinical instruction during the last session for which a clinical report is available, July 1, 1911, to June 30th, 1912, we find 1903 in-cases, including the babies in the obstetric department, and also 589 out-cases, of which 533 were ophthalmo-oto-rhino-laryngological, and 56 medical, a total of 2508, but from this number must be deducted 416 private in-patients that were not available for clinical instructions, leaving 2109 cases available for clinical instruction, not including dermatological out-patients of whom no report is available. This number is further reduced by a system of checking in and out at the hospital.

Let us compare this with the clinical material available in a few neighboring schools, because such a comparison is absolutely necessary to arrive at any correct estimate of the relative value of the clinical material at Iowa City.

In Washington University at St. Louis, from July 1, 1911, to June 30th, 1912, there were available for clinical teaching, in hospital and dispensary, 11,615 new patients, or a total of 54,186 new and old patients. From July 1, 1911, to June 30th, 1912, there were available for clinical teaching in the same school, a total of 15482 new in-and-out-patients, or a total of 69,199 new and old patients.

In the University of Minnesota from Sept. 12th, 1912, to June 30th, 1913, there were available for clinical instruction 1306 in, and 27,998 out-patients. In addition, the clinical teachers of the University control one-half of the 3500 patients in the Minneapolis City Hospital all of the time, and also all of the five thousand patients in the St. Paul City Hospital for half of the time.

Rush Medical College, from March 31, 1912, to March 31st, 1913, admitted to the Presbyterian Hospital a total of 3492 ward or clinical patients; in addition there were 15,985 new patients in the dispensary or a total of 19,477 new patients; counting revisits there were 55,326 cases in the dispensary. In addition Rush Medical College has charge of the clinical material of the Children's Memorial Hospital, and Home for Crippled Children, the Durand Hospital for Infectious Diseases, and one half of the 1800 beds of Cook County Hospital.

In the Hospital of the University of Michigan, there were admitted from July 1, 1910, to July 1st, 1911, 5536 patients; from July 1, 1911 to July 1st, 1912, this number was increased by about 1000. In addition, the University furnished an out-clinic service in which 75 patients per day were treated. Private patients are not admitted to the University of Michigan Hospital and all patients are treated by staff physicians or their assistants. When patients are transferred from one department to another they are not checked out and checked in again; they are considered as in-patients so long as they remain in the hospital and they are given but one number. Babies born in the hospital are registered as children and are kept until 6 weeks old and are not counted as obstetric cases.

The Committee offers the following as its conclusions:

(1). The number, variety, and the quality of clinical cases leave much to be desired.

(a). In internal medicine, cases are limited. The necessity for a large number of patients is more important now than a few years ago, because the clinical side of medicine is again recognized to be of the utmost importance, the laboratory side less so.

(b). In surgery entirely too much time has been spent on the bench witnessing appendix and hernia operations. All the cases were operated on before the entire class, and students felt that their time was not properly spent in seeing over and over again the same operations.

(c). Gynecology: Much improvement is needed in this department. Students see a sufficient number of operations, but the diagnostic side of the course is very weak.

(d). In obstetrics, there is a very general opinion that the head of the department is not interested in his work, that he neglects his classes, that the instruction is very weak, more especially for this course which is most important to the general practitioner. The Committee is pleased to report that the practical work is uniformly satisfactory to the students.

(2). The probably soon to be enforced hospital year is being seriously considered by students, many of whom are looking forward to a year of interne-ship in a hospital, and they feel that the larger cities offer many more desirable interneships, although 50 per cent of the graduates now accept interne-ships.

In conclusion your Committee expresses the conviction that a strong Medical School in Iowa would be a great benefit to both the profession and the people. Such a school must receive adequate financial support from the State, must have an abundance of clinical material, and must be organized on a proper University basis.

L. W. Littig, Chairman.
F. W. Dean,
Max Emmert.

Minority Report.

To the House of Delegates of the Iowa State Medical Society.

We, the undersigned members of the Committee appointed by you to report on the status of medical education in Iowa, beg to submit the following Minority report.

(1). There remain but two medical schools in Iowa, viz.—the medical department of the University and the Homeopathic Medical department of the University of Iowa.

(2). The attendance the past decade has decreased approximately 50 per cent, which is not out of proportion to the decreased attendance in the other class A medical colleges of the United States.

(3). The past decade the teaching force and material equipment of our medical college has more than trebled.

(4). The increased equipment and decreased attendance is all to the advantage of the Iowa student, giving him much more personal consideration than was formerly possible.

(5). Clinical material is on the increase, and every department is making the most of its advantages.

(6). Laboratory equipment is of the highest standard, and is sufficiently manned so that students receive much private personal instruction.

(7). The College is wisely securing interne-ships for every graduate that can be persuaded to accept.

(8). The Council on Medical Education of the American Medical Association places the Iowa State Medical College in Class A. plus, in which class there are included but twenty-seven colleges in this entire country. In this extra high classification every red-blooded resident of Iowa should justly be proud.

(9). Not destructive criticism, but constructive boosting is the College's merited need, to the end that progress shall not be halted and personal strife shall be forgotten.

T. U. McManus,
H. J. Prentiss.

After considerable discussion Dr. Voldeng offered the following resolution:

'Resolved, that the incoming President appoint a special committee of three to which these two reports shall be submitted, with full authority to report thereon to the House of Delegates of the Iowa State Medical Society at its next annual session." Said motion being followed by discussion by Drs. Albert, Frantz, Voldeng, Spilman. After which, this motion was put to vote by a show of hands, being adopted by a vote of 33 in favor to 10 opposed.

The next in order being unfinished business, Dr. Luckey introduced the following resolution: "In order to further the campaign against tuberculosis, Be it Resolved that the retiring president of the Iowa State Medical Society, appoint a committee of five members, whose duty it shall be to investigate and determine the advisability of initiating a commission, society or other organization to promote the study and prevention of tuberculosis in Iowa; such committee to present its conclusions, together with such recommendations as may seem fitting, at the next regular meeting of this Society."

On motion duly made and seconded, the resolution was declared adopted.

The resignation of Dr. Dunkleberg, as Councilor for the Third Congressional District was read by the Secretary. It was moved and seconded that the resignation be accepted, motion put and carried.

The Secretary then offered the following amendments to the By-Laws: Amend Chapter IX. Section 1. by changing April 1st, to January 1st.

Amend Chapter IX. section 2, by omitting the words "The date above stated" and inserting in lieu thereof "February 1st."

Amend Chapter XII. Section 12, by omitting the words "Thirty days in advance of each annual session, and at the same time that the dues accruing from the annual assessment are sent in", and insert in lieu thereof "on or before February 1st, of each year".

Dr. Osborn made the following motion: "I move you that the action of the Trustees and the Secretary in making the Journal optional for this year, be approved by the House of Delegates, and that the Secretary be instructed to notify the members of the Society, and the county secretaries, that hereafter the Journal shall be obligatory. Motion seconded and carried.

Moved by Dr. Boice that members received into the Iowa State Medical Society by transfer from other State Societies, without the payment of dues, be not entitled to receive the Journal nor to participate in the benefits of the Medico-Legal feature of this Society. Motion seconded and carried.

On motion duly made and seconded, the meeting adjourned to 8:00 A. M. Friday, May 15th, 1914.

Friday morning Meeting of the House of Delegates, May 15th, 1914:

Meeting called to order by the President. Roll call showed 47 members present.

The first business in order was the report of nominating committee, and Dr. Lewis Schooler, on behalf of that committee, made the following nominations: For President, H. C. Eschbach, of Albia; Van Buren Knott, Sioux City; Max Witte, Clarinda. First Vice President, D. W. Smouse, Des Moines; Second Vice President, J. F. Herrick, Ottumwa; Editor, D. S. Fairchild, Clinton, to succeed himself.

Council:

2nd. District, to fill vacancy, Henry Albert, Iowa City.

4th District, to fill vacancy, Paul E. Gardner, New Hampton.

7th District, C. W. Cornell, Knoxville, full term.

8th District, J. F. Aldrich, Shenandoah, full term.

3rd District, to fill vacancy, J. C. Powers, Hampton.

Trustee, J. N. Warren, Sioux City.

Delegates to A. M. A., L. W. Littig, Davenport; M. N. Voldeng, Cherokee.

Alternates: W. L. Bierring, Des Moines, D. H. Bowen, Waukon.

Committees.

Medico-Legal: Lewis Schooler, Des Moines, to fill vacancy and for full term.

Constitution and By-Laws: D. C. Brockman, Ottumwa, Max Emmert, Atlantic, and E. Hornibrook, Cherokee.

Public Policy and Legislation: T. F. Duhigg, Des Moines, B. L. Eiker, Leon; and W. S. Conkling, Des Moines.

Publication. J. W. Osborn, Des Moines; M. J. Kenefick, Algona; and W. L. Bierring, Des Moines.

Finance: W. W. Pearson, Des Moines; C. P. Frantz, Burlington; C. J. Saunders, Ft. Dodge.

Health and Public Education: Paul E. Gardner, New Hampton; Jeanette M. Throckmorton, Chariton; Henry Albert, Iowa City.

Dr. Albert asked to have the name of Dr. Max Witte withdrawn from nomination at Dr. Witte's request.

The meeting proceeded to ballot on election of President, Drs. Eiker and Boice being appointed tellers by the Chair. The result of the ballot showed 50 votes cast. H. C. Eschbach receiving 25, and Van Buren Knott receiving 25. The President announced the result a tie, and ordered a new ballot. There being a discrepancy between the roll call and the number of votes cast, the roll was called again, showing 50 members present. A new ballot was then taken, with the result that Dr. H. C. Eschbach received 26 votes, and Dr. Van Buren Knott, 23 votes. The President declared Dr. H. C. Eschbach to be duly elected President, for the ensuing year.

Dr. Small moved that the Secretary be instructed to cast the ballot of this Society for the rest of the officers as named by the nominating committee. Motion seconded and carried.

The ballot was so cast and the nominees were declared duly elected.

Dr. Boice moved that Dr. Eschbach be unanimously elected, said motion being seconded, was unanimously carried.

On motion of Dr. Schooler, that Waterloo be selected as the meeting place for the Society in 1915, duly seconded, the same was declared carried, and Waterloo was selected as the meeting place for the next session, commencing the second Wednesday in May, 1915.

Dr. Small offered the following amendment to Article 12 of the Constitution, said article originally reading as follows:

"The House of Delegates may amend any article of this constitution by a two-thirds vote of the Delegates registered at the Annual session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been sent officially to each component County Society at least two months before the Session at which final action is to be taken," and I would amend same, striking out all after the word "been" in line 8, and insert "published in the Journal of this Society." The Article will then read, "such amendment shall have been presented in open meeting at the previous Annual Session and shall have been published in the Journal of this Society."

Dr. Small offered the following resolution, to amend Sec. 3 of Article XIII by adding after the word "Councilor" in the 7th line, the words "and Trustee."

The above motions as proposed were laid over under the constitution for one year.

The Secretary called up the following amendments to the By-Laws the same having laid over one day. Amend Chapter IX, Sec. 1 of the By-Laws, by changing the date when the dues become payable to January 1st, instead of April 1st, and moved the adoption of the amendment. Same being seconded, was declared duly adopted.

Amend Chapter IX, Sec. 2, by omitting the words "on or before the date stated," and inserting in lieu thereof "February 1st." (That means that the reports must reach the Secretary's office by February 1st, or the County Society goes into suspension) and moved the adoption of this amendment. Motion seconded and carried.

Amend Chapter XII, Sec. 12 of the By-Laws by omitting the words "Thirty days in advance of each Annual Session, and at the same time that the dues accruing from the Annual Assessments are sent in," and inserting in lieu thereof "on or before February 1st," and moved the adoption of this amendment. Said motion being seconded was declared duly adopted.

The Secretary read the following resolution as adopted by the Medical Society of the State of New York.

"Resolved by the Medical Society of the State of New York that Congress be urged to provide for the mental examination of arriving immigrants by physicians in the United States Public Health Service, especially trained in the diagnosis of insanity and mental defects; to provide adequate facilities for the detention and careful mental examination of all immigrants at large ports of entry; to provide for the detail of American Medical Offices on vessels bringing immigrants to this country in order that their welfare may be safeguarded and those with mental diseases or defects discovered; to provide for the assumption by the Federal Government of an equitable share of the burden of caring for dependent aliens which is now borne entirely by the States, and to provide for the safe and humane return to their own homes of those immigrants whom it is necessary to exclude and of those aliens in our public institutions who desire to return, and be it further,

Resolved that copies of this resolution, duly attested, be sent to the President and Vice President of the United States, the Secretary of Labor, the Surgeon-General of the United States Public Health Service, The Commissioner-General of Immigration, and to each member of the New York State Delegation in Congress."

On motion made and seconded, the above resolution was adopted by the Society.

The next in order was the report of the Board of Trustees, which was given verbally by Dr. G. N. Ryan, of Des Moines. The discussion which followed was participated in by Drs. Small, Frantz, Osborn, Boice, and Albert.

Motion made and duly seconded to adopt the report of the Board of Trustees, same was declared carried.

Dr. H. C. Eschbach tendered his resignation as Councilor of the 6th Congressional District, and same, on motion made and seconded, was accepted.

Dr. Small moved that the House of Delegates extend a vote of thanks to the people of Sioux City and to the Woodbury County Medical Society for their courtesies and kindness during the present Session of this Society, and same having been seconded, was declared duly carried.

On motion made and seconded, the meeting was declared adjourned, to meet in Waterloo, Iowa, the 2nd Wednesday in May, 1915.

J. W. Osborn, Secretary.

At a meeting of the Council held immediately after the adjournment of the House of Delegates, Dr. J. F. Herrick was elected Councilor for the 6th Congressional District to succeed Dr. H. C. Eschabch, resigned.

Dr. Paul E. Gardner was elected President and Dr. C. A. Boice was elected Secretary of the Council.

C. A. Boice, Secretary.

MINUTES OF PROCEEDINGS

of the Sixty-third Annual Session of the

IOWA STATE MEDICAL SOCIETY,

Held at Sioux City, May 13-15, 1914.

The sixty-third annual session of the Iowa State Medical Society was called to order by President Lee Wallace Dean of Iowa City at 9:00 A. M., May 13, 1914, in the ballroom of the Hotel Martin, Sioux City, Iowa.

Rev. Wallace M. Short of Sioux City pronounced the invocation.

The address of welcome was made by Dr. Van Buren Knott of Sioux City, with response by Dr. Edward Hornibrook of Cherokee.

The scientific program was thereupon taken up, Chairman J. E. Luckey of Vinton, of the Section on Medicine, and Chairman J. W. Harrison of Guthrie Center, of the Section on Surgery, occupying seats upon the platform.

The Papers "The Early Recognition of Tuberculosis by the General Practitioner," by J. H. Peck of Des Moines, and "Tuberculosis—Something of the Present Situation and Needs in Iowa," by H. V. Scarborough of Iowa City, were read and upon motion of Dr. D. S .Fairchild were discussed together. Upon motion of Dr. Jepson the privilege of the floor was extended to visiting guests. The papers were discussed by J. W. Kime, Fort Dodge; F. J. Murphy, Sioux City; J. Ross Augustine, Ladora; W. E. Scott, Adel; Samuel Kline, Sioux City; Guy P. Reed, Davis City; A. J. Booker, Des Moines; Lewis Schooler, Des Moines, Drs. Peck and Scarborough closed the discussion.

President L. W. Dean thereupon read his annual address, "The Education of the Specialist," Dr. Luckey occupying the chair.

The chairman appointed as committee on President's Address C. B. Taylor, What Cheer; Geo. E. Crawford, Cedar Rapids; H. C. Eschbach, Albia.

Adjournment was thereupon taken for luncheon.

Afternoon Session.

President Dean read a telegram of greetings from Nebraska State Medical Association, signed by Joseph McCann. Upon motion of Dr. W. L. Bierring the Secretary was instructed to send a message of greeting in response.

President Dean announced the absence of Dr. A. L. Brooks of Audubon, Dr. T. E. Powers of Clarinda, and Dr. C. E. Conn of Battle Creek, all on account of illness, and the consequent omission of their papers from the program. Upon motion of W. L. Bierring the Secretary was instructed to send telegrams of greetings, condolence and best wishes to each of said persons.

The scientific program was continued as follows:

Address of the Chairman on Medicine—"The Physician's Relation to Public Health, with a Report on a Diphtheria Epidemic"— J. E. Luckey, Vinton.

"Brain Abscess, with Report of a Case," L. C. Kern, Waverly. Discussed by H. G. Langworthy, Dubuque; W. L. Bierring, Des Moines; Wm. Jepson, Sioux City; closed by Dr. Kern.

"Sex Teachings," G. C. Moorehead, Ida Grove. Discussed by Edward Hornibrook, Cherokee; R. R. Williams, Manning; closed by Dr. Moorhead.

Address of the Chairman on Surgery, J. W. Harrison, Guthrie Center.

"The Relation of Anaphylaxis to General Medicine," A. M. Loes, Dubuque. Discussed by W. L. Bierring; closed by Dr. Loes.

"The Tonsil and its Relation to Systemic Infections," H. B. Gratiot, Dubuque; "Sinus Infections," W. W. Pearson, Des Moines.

Discussion by Robert Levy, Denver, Colo.; J. W. Cokenower, Des Moines; W. L. Bierring, Des Moines; closed by Drs. Gratiot and Pearson.

Adjourned to 7:30 P. M.

Evening Session.

Dr. Robert Levy of Denver addressed the Society upon "The Significance of Laryngeal Manifestations during the Course of Pulmonary Tuberculosis, Based upon a Study of Five Hundred Cases."

Upon motion of Dr. H. B. Gratiot, a vote of thanks was tendered Dr. Levy for his valuable paper.

Dr. Frank T. Breene of Iowa City read a paper on "The Mouth as a Source of Systemic Infection." No discussion.

Adjourned to Thursday, May 14, at 9:00 A. M.

Thursday, May 14.—Morning Session.

The following papers were read and discussed:

"Post-Operative Ileus," J. R. Guthrie, Dubuque. Discussion by J. F. Herrick, Ottumwa; L. W. Littig, Davenport; closed by Dr. Guthrie.

Dr. Arthur D. Bevan of Chicago addressed the Society upon the subject, "Borderland Cases and Team Work in Surgery."

Upon motion of Dr. J. R. Guthrie a rising vote of thanks was tendered Dr. Bevan for his address.

"The Diagnosis of Cancer of the Intestinal Tract," Wm. Jepson, Sioux City. Discussed by D. C. Brockman, Ottumwa; Van Buren Knott, Sioux City; S. A. Spilman, Ottumwa; Frank M. Fuller, Keokuk.

"Shock," by C. B. Taylor, What Cheer. Discussed by J. Ross Augustine, Ladora; G. N. Ryan, Des Moines; C. S. James, Centerville; A. J. Booker, Des Moines; G. E. Crawford, Cedar Rapids; closed by Dr. Taylor.

"Cholelithiasis, like Appendicitis, Should be Treated by Early Operation," J. Ross Augustine, Ladora. Discussed by C. E. Ruth, Des Moines;

Charles J. Rowan, Iowa City; W. L. Bierring, Des Moines; C. J. Wahrer Fort Madison; W. E. Scott, Adel; G. E. Crawford, Cedar Rapids; closed by Dr. Augustine.

Adjourned to 1:30 P. M.

Afternoon Session.

The Secretary announced that he had received the papers of Dr. C. E. Conn of Battle Creek and Dr. J. T. Strawn of Des Moines, and moved that they be read by title. Carried.

The Secretary also read a letter of greeting from ex-President, C. F. Wahrer of Fort Madison, expressing regret at his inability to be present.

The following papers were read and discussed:

"Blood Pressure"— How to Take it—What it Signifies; Geo. E. Crawford, Cedar Rapids. Discussed by W. L.Bierring, Des Moines; D. N. Loose, Maquoketa; closed by Dr. Crawford.

"Gastric Functional Disorders," F. J. Murphy, Sioux City. Discussed by L. W. Littig, Davenport; J. F. Herrick, Ottumwa; F. S. Williams, Villisca; J. T. McClintock, Iowa City; closed by Dr. Murphy.

Dr. Hugh T. Patrick of Chicago then addressed the convention on "Headaches."

Upon motion of Dr. D. C. Brockman a rising vote of thanks was tendered Dr. Patrick for his address.

"Rabies in Iowa," Henry Albert, Iowa City. Discussed by S. A. Spilman, Ottumwa; closed by Dr. Albert.

"Myocarditis," H. C. Eschbach, Albia. Discussed by W. L. Bierring, Des Moines.

"Colon Bacillus Infections," Max Emmert, Atlantic. Discussed by A. M. Pond, Dubuque; C. E. Ruth, Des Moines; W. L. Bierring, Des Moines; closed by Dr. Emmert.

Adjourned to Friday, May, 15, 9:00 A. M.

Friday, May 15.—Morning Session.

Dr. J. F. Herrick of Ottumwa read a paper on the subject, "Conservation of the Middle Aged."

Upon motion of Dr. Luckey, discussion of the remaining papers was deferred until all had been read.

The Committee on President's Address presented the following report, read by C. B. Taylor, chairman:

"The Committee on President's Address begs leave to report:

"That the President has selected a timely topic; that too many men are specializing who have a narrow horizon; that this is not so much the fault of the individual as it is of the system.

"We are a well-organized community, and pioneers are no longer needed, and the President has struck the keynote when he says that with a broad fundamental education the specialist becomes of help to the general practitioner and of service to the patient.

"The commitee wishes to congratulate the President upon his stand that the University and State should take up the matter of the preparation of the specialist with the view to make him a decided asset to the state; the committee believes that the results of such action on the part of the state cannot help bringing large returns for the money expended.

Since the American Medical Association has a committee whose business it is to make recommendations for advanced instruction for the specialist, it is the recommendation of this committee that a copy of the

President's address be sent to the Journal of the A. M. A. for publication.

"Chas. B. Taylor
"H. C. Eschbach } Committee"
"G. E. Crawford

(First Vice-President Smith in the chair.)

Upon motion of Dr. Bierring, the report was received and adopted.

Dr. Walter L. Bierring of Des Moines delivered the Oration on Medicine, upon the subject, "Problems of Medical Prognosis."

The following papers were then read:

"Benign Tumors of the Breast," Oliver J. Fay, Des Moines.

"Malignant Tumors of the Breast," D. C. Brockman, Ottumwa.

'What the Public Should Know About Cancer," L. W. Littig, Davenport.

Upon motion of Dr. Bierring, the paper of Dr. Littig was ordered given to the press for publication with the Society's indorsement.

The Secretary presented a report of the transactions of the House of Delegates.

The Chairman appointed a committee consisting of Drs. Taylor and Crawford to conduct to the chair President-elect H. C. Eschbach, who made a brief speech of acceptance.

Dr. Donald Macrae of Council Bluffs then delivered the Oration on Surgery.

The last paper to be read was by Frank M. Fuller of Keokuk on "Adolescence: Its Relation to Primary and Secondary Diseases." Discussed by G. H. Hill, Des Moines.

The Secretary stated that he had received the paper of A. W. Sherman of Burlington, "The Non-Operative Treatment of Fractures of the Femur," and moved that it be read by title. Carried.

The Secretary announced the appointment of the following committees by President Dean:

Promotion of the Study of Tuberculosis: J. E. Luckey, Vinton; H. V. Scarborough, Oakdale; J. H. Peck, Des Moines; F. W. Dean, Council Bluffs; W. J. Egloff, Mason City.

State Medical Library: W. W. Pearson, Des Moines; C. B. Taylor, What Cheer; J. Ross Augustine, Ladora.

Upon motion of Frank S. Smith the convention thereupon adjourned to meet at Waterloo the second Wednesday in May, 1915.

J. W. Osborn, Secy.

CONSTITUTION

OF THE

IOWA STATE MEDICAL SOCIETY

Adopted, April 17, 1903
Revised to May 10, 1913
Revised to May 17, 1907
Revised to May 15, 1914

ARTICLE I.

NAME OF THE SOCIETY.

The name and title of this organization shall be the Iowa State Medical Society.

ARTICLE II.

PURPOSES OF THE SOCIETY.

The purpose of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of Iowa, and to unite with similar Associations in other States to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science, to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws, to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests, and to the enlightenment and direction of public opinion in regard to the great problems of State medicine; so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.

COMPONENT SOCIETIES.

Component Societies shall consist of those County Medical Societies which hold charters from this Society.

ARTICLE IV.

COMPOSITION OF THE SOCIETY.

Sec. I. This Society shall consist of Members, Associate Members, Delegates, Guests, and Life Members.

Sec. II. Members. The members of this Society shall be the members of the component County Medical Societies.

Sec. III. Delegates. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component County Societies in the House of Delegates of this Society.

Sec. IV. Guests. Any distinguished physician, not a resident of this State, may become a guest during any Annual Session upon invitation of the Society or its Council, and shall be accorded the privilege of participating in all of the scientific work for that Session.

Sec. V. Life Members. Life members shall consist of such members in good standing as shall have paid their full annual dues, and all other obligations to the Society for thirty successive years, and of such other worthy members as the Society may designate by unanimous vote. They shall receive the transactions of the Society, and enjoy all the privileges of members, but shall be excepted from payment of the Annual dues.

Sec. VI. Associate Members. Teachers in any regular Medical School, resident in Iowa, in no manner engaged in the practice of medicine, and not otherwise eligible to regular membership, may become ASSOCIATE MEMBERS of this Society, when elected ASSOCIATE MEMBERS of the Component Society of the county in which said teachers live. Such members shall be designated ASSOCIATE MEMBERS, they shall enjoy the same privileges as regular members and shall be subject to the same conditions.

ARTICLE V.

HOUSE OF DELEGATES.

The House of Delegates shall be the Legislative and Business Body of the Society, and shall consist of (1), Delegates elected by the Component County Societies, and (2), ex-officio, the officers of the Society as defined in this Constitution.

ARTICLE VI.

SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may pro-

vide for a division of the scientific work of the Society into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such Societies to be composed exclusively of members of Component County Societies.

ARTICLE VII.

SESSIONS AND MEETINGS.

Section I. The Society shall hold an Annual Session, during which there shall be held daily not less than two General Meetings, which shall be open to all registered members, delegates and guests.

Sec. II. The time and place for holding each Annual Session shall be fixed by the House of Delegates.

ARTICLE VIII.—OFFICERS.

Section I. The officers of this Society shall be a President, two Vice-Presidents, a Secretary, a Treasurer, eleven Councilors and three Trustees.

Sec. II. The President and Vice-Presidents shall be elected for term of one year. The Secretary and Treasurer for three years, and the Councilors for five years, the Councilors being divided into classes so that two shall be elected each year. The Trustees shall be elected for three years, one each year. All these officers shall serve until their successors are elected and installed.

Sec. III. The officers of this Society shall be elected by the House of Delegates, on the morning of the last day of the Annual Session, but no delegate shall be eligible to any office named in the preceeding section, except that of the Councilor, and no person shall be elected to any office who is not in attendance upon that Annual Session and who has not been a member of the Society for the past two years.

ARTICLE IX.

FUNDS AND EXPENSES.

Funds for meeting the expenses of the Society, shall be arranged for by the House of Delegates by an equal per capita assessment upon each County Society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publications. Funds may be appropriated by the House of Delegates to defray the expenses of the Annual Sessions, for publication, and for such other purposes as will promote the welfare of the Society and Profession.

ARTICLE X.—REFERENDUM.

At any general meeting the Society may by a two-thirds vote order a general referendum upon any question pending before or passed by the House of Delegates, and the House of Delegates shall by a similar vote of its own members or after a like vote of a general meeting, submit any such question to the membership of the Society for a final vote. A majority of the members voting shall decide the question and be binding on the House of Delegates.

ARTICLE XI.—THE SEAL.

The Society shall have a Common Seal, with power to break, change, or renew the same at pleasure.

ARTICLE XII.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates registered at the Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been sent officially to each Component County Society at least two months before the Session at which final action is to be taken.

BY LAWS.

CHAPTER I. MEMBERSHIP.

Section I. All members of the Component County Societies shall be privileged to attend all meetings and take part in all of the preceedings of the Annual Sessions, and shall be eligible to any office within the gift of the Society.

Sec. 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a chartered County Society which has paid its Annual Assessment, or a receipt for dues for the current year from the Secretary or Treasurer of the County Society to which he belongs, shall be prima facie evidence of his right to register at the Annual Session in the respective bodies of this Society.

Sec. 3. No person who is under sentence of suspension or expulsion from any Component Society of this Society, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of its proceedings until such time as he has been relieved of such disability.

Sec. 4. Each member in attend-

ance at the Annual Session shall enter his name on the registration book, indicating the Component Society of which he is a member. No member or delegate shall take part in any of the proceedings of an Annual Session until he has complied with the provisions of this section.

Sec. 5. For the purpose of medical defense a member shall be regarded as in good standing only when his dues have been received by the Secretary of the State Society; nor shall any member under suspension or expulsion be eligible to the benefits of the Medico-Legal fund for any alleged wrongful act while under suspension or expulsion.

Sec. 6. Provided that if the Annual report, and the per capita apportionment of any Component Society, is not received by the Secretary of the State Society for two consecutive years, then the charter of that Society shall be automatically revoked, and the Secretary of the State Society, shall notify the Secretary of such Society to that effect.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE SOCIETY.

Section 1. The Society shall hold an Annual Session at such time and place as has been fixed at the preceeding Annual Session by the House of Delegates.

Sec. 2. Special Sessions of either the Society or the House of Delegates shall be called by the President at his discretion or upon petition of twenty delegates.

Sec. 3. The fiscal year of this Society shall be the calendar year.

CHAPTER III.—GENERAL MEETINGS.

Section 1. The General Meetings shall include all registered members, delegates and guests, who shall have equal rights to participate in the proceedings and discussions, and except guests, to vote on pending questions. Each general meeting shall be presided over by the President, or in his absence or disability, or by his request, by one of the Vice Presidents. Before it, at such time and place as may have been arranged, shall be delivered the Annual Address of the President and the Annual Orations, and the entire time of the Session so far as may be, shall be devoted to papers and discussions relating to Scientific Medicine.

Sec. 2. The General Meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the House of Delegates.

Sec. 3. Except by special vote, the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

Sec. 4. No address or paper before the Society, except those of the President and Orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes nor more than once on any subject.

CHAPTER IV.—HOUSE OF DELEGATES.

Section 1. The House of Delegates shall meet Annually at the time and place of the Annual Session of the Society, and shall so fix its hours of meeting as not to conflict with the first general meeting of the Society, or with the meeting held for the address of the President and the Annual Orations, and so as to give delegates an opportunity to attend the other scientific preceedings and discussions so far as it is consistent with their duties. But if the business interests of the Society and the profession require, it may meet in advance, or remain in session after the final adjournment of the General Meeting.

Sec. 2. Each Component County Society shall be entitled to send to the House of Delegates each year, one delegate for every fifty members, and one for each major fraction thereof, but each County Society holding a charter from the Society, which has made its Annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate.

Sec. 3. A majority of the registered Delegates shall constitute a quorum, and all of the meetings of the House of Delegates shall be open to members of the Society.

Sec. 4. It shall through its officers, advisory and Councilors consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

Sec. 5. It shall make careful inquiry into the condition of the profession of each County in the State,

and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such County Societies as already exist and for organizing the profession in Counties where Societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality and shall continue these efforts until every physician in every County of the State who can be made reputable has been brought under medical Society influence.

Sec. 6. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body in such a manner that not more than One-half of the Delegates shall be elected in any one year.

Sec. 7. It shall, upon application, provide and issue charters to County Societies organized to conform to the spirit of this Constitution and By-Laws.

Sec. 8. In sparsely settled sections it shall have authority to organize the physicians of two or more Counties into Societies to be designated by hyphenating the names of two or more Counties so as to distinguish them from district and other classes of Societies, and these Societies, when organized and chartered, shall be entitled to all the privileges and representation provided therein for County Societies, until such Counties may be organized separately.

Sec. 9. It shall have authority to appoint committees for special purposes from among members of the Society who are not members of the House of Delegates, and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

Sec. 10. It shall approve all memorials and resolutions issued in the name of the Society before the same shall become effective.

Sec. 11. It shall present a summary of its proceedings to the last General Meeting of each Annual Session, and shall publish the same in the Transactions.

CHAPTER V.—ELECTION OF OFFICERS.

Sec. 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect.

Sec. 2. On the first day of the Annual Session, there shall be selected a Committee on Nominations consisting of eleven delegates, one from each congressional district, such committee shall be selected by the delegates of each congressional district in separate caucuses, and such caucuses shall at the same time select the member of the Council for the same district. It shall be the duty of this committee to consult with the members of the Society and to hold one or more meetings at which the interests of the Society and the profession of the State for the ensuing year shall be carefully considered. The Committee shall report the result of its deliberations to the House of Delegates in the shape of a ticket containing the names of three members for the office of President, and one member for each of the other offices to be filled at that Annual Session. No two candidates for President shall be named from the same County.

Sec. 3. The report of the Nominating Committee and the election of officers shall be the first order of business of the House of Delegates, after the reading of the minutes, on the third day of the General Session.

Sec. 4. Nothing in this article shall be construed to prevent additional nominations being made by members of the House of Delegates.

CHAPTER VI.—DUTIES OF OFFICERS.

Sec. 1. The President shall preside at all meetings of the Society and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver an Annual address at such time as may be arranged; shall give a deciding vote in case of a tie; and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and as far as practicable shall visit by appointment the various sections of the State and assist the Councilors in building up the County Societies, and in making their work more practical and useful.

Sec. 2. Vice Presidents. — The Vice Presidents, when called upon, shall assist the President in the performance of his duties, and during his absence, or at the request of the President, one of them shall officiate in his place. In the case of death, resignation or removal of the President, the vacancy shall be filled by the Senior Vice President beginning with the first. They shall perform all other duties prescribed for that office.

Sec. 3. The Treasurer shall give

bond in the sum of $5,000.00. Such bond to be procured from some reliable security Company and to be approved by the Board of Trustees. The expense of procuring such bond to be paid by this Society. Said bond to be held by the Board of Trustees. All surplus money in the hands of the Treasurer shall be placed at interest in some Bank approved by the Board of Trustees, and such interest shall be turned into the Treasury of the Society. The Treasurer shall demand and receive all funds due the Society from the Secretary, together with the bequests and donations. He shall pay money out of the Treasury only on a written order of the President counter-signed by the secretary and approved by the Board of Trustees. He shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands. He shall charge upon his books the assessment against each Component Society at the end of the fiscal year; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him.

Sec. 4. The Secretary, acting with the Committee on Scientific Work, shall prepare and issue the programs for and attend all meetings of the Society and of the House of Delegates, and he shall keep minutes of their respective proceedings in separate record books and papers belonging to the Society, except such as properly belonging to the Treasurer, and he shall collect all assessments against each Component Society, and shall keep account of and promptly turn over to the Treasurer all funds of the Society which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall keep a card index register of all the legal practitioners of the State by counties, noting on each his status in relation to his County Society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the County Societies and in the extension of the power and usefulness of this Society. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall act as chairman of the Committee on Publication. He shall employ such assistance as may be ordered by the Council or the House of Delegates, He shall annually make a report of his doings to the House of Delegates. In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the House of Delegates, and shall be paid quarterly.

Sec. 5. The Board of Trustees shall have charge of the property and financial affairs of the Society, and shall meet quarterly, the expenses of such meetings to be paid by the Society as provided in Sec. 4. Chapter IX. of the By-Laws, but this shall not be construed to include the expenses in attending the Annual Sessions.

CHAPTER VII—THE COUNCIL.

Sec. 1. The Council shall hold daily meetings during the Annual Session of the Society, and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall meet on the last day of the Annual Session of the Society for re-organization and for the outlining of work for the ensuing year. At this meeting it shall elect a Chairman and Secretary, and it shall keep a permanent record of its proceedings. It shall, through its chairman make an Annual report to the House of Delegates at such time as may be provided.

Sec. 2. Each Councilor shall be organizer for his district. He shall visit each county in his district at least once a year for the purpose of organizing Component Societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the County Societies and their members. The Councilor may, when advisable, appoint a deputy or deputies to assist him in his work to carry out the requirements of this section. He shall make an Annual report of his doings, and of the condition of the profession of each county in his district to each Annual Session of the House of Delegates. The necessary traveling, and other actual expenses incurred by such Councilor or his deputy, or deputies, in the line of the duties herein imposed, having been approved by the Board of Trustees, shall be allowed by the House of Delegates upon a proper itemized statement, but this shall not be con-

strued to include his expenses in attending the Annual Session of the Society.

Sec. 3. Collectively the Council shall be the Board of Censors of the Society. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the Component Societies, or to this Society. All questions of an ethical nature brought before the House of Delegates of the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a County Society, upon which an appeal is taken from the decision of an individual Councilor. Its decision in all such cases shall be final.

Sec. 4. The Council shall have the right to communicate the views of the profession and of the Society in regard to health, sanitation and other important matters to the public and the lay press. Such communications shall be officially signed by the Chairman and Secretary of the Council, as such.

CHAPTER VIII.—COMMITTEES.

Sec. 1. The standing committees shall be as follows:

A Committee on Scientific Work.
A Committee on Public Policy and Legislation.
A Committee on Publication.
A Committee on Nominations.
A Committee on Necrology.
A Committee on Constitution and By-Laws.
A Committee on Finance.
A Medico-Legal Committee.
A Committee on Arrangements.
A Committee on Health and Public Instruction.
A Committee to receive Resignations and to fill Vacancies, and such other Committees as may be necessary.

Such Committees shall be selected by the House of Delegates unless otherwise provided.

Sec. 2. The Committee on Scientific Work shall consist of three members, consisting of the President, Secretary, and Treasurer of which committee the President shall be chairman, and shall determine the character and scope of the scientific proceedings of the Society for each session, subject to the instructions of the House of Delegates or of the Society, or to the provisions of the Constitution and By-Laws. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which shall be adhered to by the Society as nearly as practicable.

Sec. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Society in securing and enforcing legislation in the interest of public health and scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape Legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote the general influence on local, state and national affairs and elections. Its work shall be done with the dignity becoming a great profession and with that wisdom which will make effective its power and influence. It shall have authority to be heard before the entire Society upon questions of great concern at such time as may be arranged during the Annual Session.

Sec. 4. The Committee on Publication shall consist of three members, of which the Secretary shall be one and Chairman, and shall have referred to it all reports on Scientific subjects and all Scientific papers and discussions heard before the Society. It shall be empowered to curtail or abstract papers and discussions, and any paper referred to it which may not be suitable for publication in the transactions may be returned to the author. The Committee shall have authority to arrange for the publication and distribution of the transactions after receiving competitive bids and shall use diligence in getting them into the hands of the members. All papers read before the Society shall be the property of the Society.

Sec. 5. The Committee on Necrology shall consist of all the members of the Council, who shall prepare for each Session suitable biographical notices of deceased members.

Sec. 6. The Committee on Nominations shall be appointed and perform its duties in accordance with the provisions of chapter V, section 2 of these By-Laws.

Sec. 7. The Committee on Arrangements shall consist of the Committee on Scientific Work and two members elected by the Component Society in the territory in which the Annual Session is to be held. It shall, by committees of its own selection, provide suitable accommodations for the meeting places of the

Society and of the House of Delegates, and of their respective committees, and shall have general charge of all the arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the Session as occasion may require.

Sec. 8. The Medico-Legal Committee shall consist of three members, all of whom shall serve without pay. The term of service of each member shall be three years, provided that in the original organization of this committee the service shall be grouped by lot into three divisions with terms expiring in one, two and three years respectively from July 1, 1907. On and after July 1, 1907, it shall be the duty of the members of this committee severally or collectively, to investigate all claims of malpractice against members, to adjust such claims in accordance with equity where possible, and if, in their judgment, an adjustment is impossible, or the claim is unjust or the damage sought is excessive, to lend such help, aid and council as they may deem proper, but they shall not pay, or obligate the Society to pay, a judgment against any member; nor shall they pay or obligate the Society to pay for legal counsel not authorized by the Medico-Legal Committee, or to pay the court costs of any suit.

They shall effect such organization as they see fit, and adopt rules for their guidance, and for the guidance of members of the State Society in Medico-Legal matters. They shall be empowered to contract with such agents (attorney or other) as they may deem necessary. They shall have charge of the Medical Defense Fund, which fund shall be secured as follows: Each member of the State Society shall be assessed $2.00 a year for this fund alone. This assessment shall be paid along with the other State dues, and through the same channels, it shall be kept in the Treasury of the Society, and shall be subject to warrants signed conjointly by the Chairman and the Secretary of the Medical Defense Committee, and approved by the Board of Trustees.

Sec. 9. The Committee on Health and Public Instruction shall consist of three members. The term of service of each member shall be three years, provided that in the original organization of the Committee, the services shall be grouped by lot, into three divisions, with terms expiring one, two, and three years respectively from the 1914 Annual Session. It is further provided that at least one member of the Committee shall be a woman.

Sec. 10. The Committee to receive and act upon resignations and to fill vacancies, shall consist of all of the members of the Council, whose duties it shall be to receive and act upon all resignations presented between the Annual Sessions, and to fill by appointment vacancies by reason of any causes whatsoever which may occur between the Annual Sessions, and which are not otherwise provided for.

CHAPTER IX.—ASSESSMENTS AND EXPENDITURES.

Sec. 1. An assessment of four dollars per capita on the membership of the Component Societies is hereby made the Annual dues of this Society. The Secretary of each County Society shall forward its assessments together with its roster of all officers and members, list of delegates and list of non-affiliated physicians of the County to the Secretary of this Society on or before January 1st prior to each Annual Session.

Sec. 2. Any County Society which fails to pay its assessment, or make the reports required, on or before February 1st, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Society or of the House of Delegates until such requirements have been met.

Sec. 3. All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Board of Trustees before being presented for final action to the House of Delegates.

Sec. 4. The necessary expenses of conducting the business of this Society during the interval between the Annual Sessions, on approval by the Trustees, shall be paid by the Treasurer on a written order of the Secretary counter-signed by the President, and a report of said expenses and expenditures shall be made by the Secretary to the House of Delegates, at the Annual Meeting.

CHAPTER X.—RULES OF CONDUCT.

The principles set forth in the Code of Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

CHAPTER XI.—RULES OF ORDER.

The deliberations of this Society shall be governed by parliamentary usage as contained in Robert's Rules of Order, unless otherwise determined by a vote of its respective bodies.

CHAPTER XII.—COUNTY SOCIETIES.

Sec. 1. All County Societies now in affiliation with the State Society or those that may hereafter be organized in this State which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, upon application to the House of Delegates, receive a charter from and become a Component part of this Society.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a Medical Society shall be organized in every County in the State in which no Component Society exists, and charters shall be issued thereto.

Sec. 3. Charters shall be issued only upon approval of the House of Delegates and shall be signed by the President and Secretary of this Society. The House of Delegates shall have authority to revoke the charter of any Component County Society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one Component Medical Society shall be chartered in any County. Where more than one County Society exists, friendly overtures and concessions shall be made with the aid of the Councilor for the District if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council. which shall decide what action shall be taken.

Sec. 5. Each County Society shall judge of the qualifications of its own members, but as such Societies are the only portals to this Society and to the American Medical Association, every reputable and legally registered physician who is practicing or will agree to practice non-sectarian medicine shall be entitled to membership. Before a charter is issued to any County Society full and ample notice and opportunity shall be given to every such physician in the County to become a member.

Sec. 6. Any physician who may feel aggrieved by the action of the Society of his County in refusing him membership, or in suspending or expelling him, shall have the right of appeal to the Council and to the House of Delegates.

Sec. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual Councilors in district and County work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a Component Society moves to another County in this State, his name, upon request, shall be transferred without cost to the roster of the County Society into whose jurisdiction he moves.

Sec. 9. A physician living near a County line may hold his membership in that County Society most convenient for him to attend provided no objection is made by the Society in whose jurisdiction he resides.

Sec. 10. Each County Society shall have general direction of the affairs of the profession in the County, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the County, and systematic efforts shall be made by each member, and by the Society as a whole, to increase the membership until it embraces every qualified physician in the County.

Sec. 11. At some meeting in advance of the Annual Session of this Society, each County Society shall elect a Delegate to represent it in the House of Delegates of this Society in the proportion of one Delegate for each fifty members, and one for each major fraction thereof, but each County Society holding a Charter from this Society, which has made its annual Report, and paid the Assessment as provided in this Constitution and By-Laws, shall be entitled to one Delegate.

Sec. 12. The Secretary of each County Society, shall keep a roster of its members, and a list of non-affiliated registered physicians of the County, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information upon blanks supplied him for the purpose, to the Secretary of this Society, on or before February 1st, of each year. In keeping such roster, the Secretary shall note any change in the personnel of the profession by death, or by removal, to or from the County, and in making his Annual Report he shall be certain to account for every physician

who has lived in the County during the year.

CHAPTER XIII.—AMENDMENTS.

These By-Laws may be amended at any Annual Session by a majority vote of all the Delegates present at that Session, after the amendments have laid upon the table for one day.

CHAPTER XIV.—THE JOURNAL.

Sec. 1. The House of Delegates shall establish an official Journal of the Iowa State Medical Society, which shall be called The Journal of the Iowa State Medical Society.

Sec. 2. The Journal shall be published monthly, and mailed not later than the 15th of the month, and it shall contain the papers and proceedings of the Annual Meeting and such other matter as is of interest to the members.

Sec. 3. The Journal shall contain not less than 48 pages per issue and editorials shall be given a prominent part.

Sec. 4. An Editor shall be elected by the House of Delegates for a period of three years, his salary shall be fixed by the Trustees, and shall be paid quarterly, and shall include all office assistance and rent. Salaries and expenses shall be paid by the treasurer on a written order of the Secretary counter-signed by the President when authorized by the Board of Trustees.

Sec. 5. An allowance shall be made for necessary office supplies and postage.

Sec. 6. The printing and mailing of the Journal shall be let by the Trustees on yearly contract conforming to required specifications, and expenses accruing therefrom shall be paid quarterly by the Treasurer on a written order of the Secretary countersigned by the President when authorized by the Board of Trustees.

Sec. 7. The advertising policy shall be that of the Journal of the American Medical Association.

Sec. 8. The Committee on Publication shall have oversight of the publication of the Journal subject to the order of the House of Delegates and shall fill vacancies as they occur. The Trustees shall audit the books of the Editor and authorize any contract which may be necessary.

Sec. 9. The Committee on Publication together with the Editor shall have editorial control of the Journal, and shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Society.

Sec. 10. All reports on Scientific subjects and all Scientific discussions and papers heard before the Society shall be referred to the Journal for publication. The Editor with the consent of the majority of the Committee on Publication may curtail or abstract papers not considered suitable for publication.

Sec. 11. All moneys received by the Editor shall be turned over to the Treasurer at the end of each month.

BOOK REVIEWS.

Report of the Committee on Inquiry into the Department of Health and Charities and Bellevue and Allied Hospitals. Appointed by the Board of Estimate and Appointment.

This report is worth examining in that it goes over matters that tend to show why hospital work is less efficient than in Europe and why medical advencement in this country in less rapid than in Europe. The first inquiry in relation to "Clinical Records in Bellevue Hospital." The examination was made by Dr. L. L. Williams on behalf of the Committee. 57 per cent of the hospital records were considered good, 30 per cent were incomplete and 13 per cent were poor. The character of the records appear to differ in different divisions of Bellevue, some reasonably satisfactory and others very poor.

Autopsy Findings in Bellevue Hospital Compared with Clinical Diagnosis.

According to the Committee's findings about 10 per cent of those dying in the hospital were submitted to autopsy. The University College Hospital in London performs autopsies on 84 per cent, Allgemeines Krankenhause in Vienna on 99.9 per cent, and most of the German hospitals on over 90 per cent of those dying in the institution.

Compared with Clinical Diagnosis (Bellevue Hospital), Clinical Diagnosis Confirmed. 22.4 per cent. Clinical diagnosis correct but autopsy disclosed additional important lesions. 29.9 per cent. Clinical diagnosis partly correct but other lesions that had contributed to the diagnosed lesions were found 13.9 per cent. Clinical diagnosis not confirmed 27.6

per cent. No clinical diagnosis in death record, 6.2 per cent. The diagnosis appears to have been incorrect in 47.7 per cent of the cases.

One of the conclusions reached by the Committee was that; "The large percentage of incorrect clinical or anti-mortem diagnosis in Bellevue is partly due to the lack of medical knowledge among our better class of practitioners, and partly due to hasty and insufficient examinations. Too much reliance placed upon inexperienced house physicians and internes also accounts for a portion of the errors". The above comparisons made for the Committee by Dr. Horst Oertel formerly Chief Pathologist of the Russel Sage Institute located at City Hospital, shows that the weakness in our hospital methods even in our great centers and the imperative need of more frequent autopsies.

In another part of the Report; Distribution of Ward Space in Bellevue Hospital and the Transfer of Patients are presented. Conclusions and recommendations are reached and argument in support is offered. The work of the hospital is carefully investigated and the results laid before the public. It is apparently believed in New York that publicity is as important in relation to hospitals as in other public tuilities.

The Clinics of John B. Murphy, M. D., At Mercy Hospital, April 1914. Published Bi-Monthly by W. B. Saunders Company, Philadelphia and London. Price $8.00 per annum. Cloth.

We are pleased to note that Dr. Murphy has given us in this number a fuller discussion on surgical and general diagnosis. No surgeon can do surgical operations with greater skill and dexterity than Dr. Murphy, but Dr. Murphy's greatest strength lies in his marvelous intellectual insight into surgical conditions, and while we are always delighted to see him operate, we care more what he thinks about the always difficult problems in surgery. Dr. Murphy in his first discussion in this (April number) has something emphatic to say about the Dispensary Service in certain New York hospitals. We have been reviewing some of the reports of the "Committee on Inquiry into the Departments of Health, Charities, and Bellevue and Allied Hospitals." Some things of a surprising nature are made public in these reports as to methods of diagnosis which will no doubt lead to better things. Dr. Murphy uses these facts to emphasize certain contentions of his own in reference to painstaking care in diagnosis.

All through this valuable number, Dr. Murphy has taken a clinical case as a text for a lecture on the methods of diagnosis. For instance, conditions of the gallbladder indicating a cholecystectomy. Acute Pancreatic Cyst, Duodenal Ulcer, Goitre, Tuberculosis of the Kidney, and several other subjects treated in the same way. All treated first from the standpoint of diagnosis. Many can do skillful operations but real surgery is the close and accurate diagnosis which largely determines the operation and the immediate and remote results. Dr. Murphy is to be congratulated on the excellence of this number.

A Treatise on Disease of the Skin. For the use of advanced students and practitioners. By Henry W. Stelwagon, M. D., Ph. D. Professor of Dermatology, Jefferson Medical College, Philadelphia. Seventh edition thoroughly revised. Octavo of 1250 pages with 334 text-illustrations and 33 full-page colored and half-tone plates. W. B. Saunders Company. 1914. Cloth $6.00 net. Half Morocco $7.50 net. Philadelphia and London.

This well known work on skin disease has gone through seven editions, a sufficient guarantee of the value of the work and an evidence of the appreciation of its merits by the profession. It is a well known fact that the great majority of the profession do not take enthusiastically to disease of the skin, and find diseases which they cannot see, more attractive, but we cannot escape being confronted by skin affections, and therefore must learn something about them. No book on skin diseases can furnish more information than Stelwagon. We are informed by the author that the past several years have been a period of active investigation in several of the chief dermatologic diseases, notably syphilis, leprosy, pellagra, tropical diseases, and others.

It is extremely difficult to review a work like this; to follow the astonishingly fine shades of difference in the multitude of skin affections. The grouping of disease of the skin into Inflammations, Hemorrhages, Hypertrophies, Atrophies and New Growths, lays the foundation for successful study. It enables one to form a conception of the underlying path-

ology and to apply a logical treatment. We can no doubt render our readers the greatest service by calling attention to this new edition of Stelwagon.

The Rockefeller Sanitary Commission for the Eradication of Hookworm Disease. Fourth Annual Report for the year 1913. Office of the commission Washington, D. C.

The First Division of the Report is statistical and presents some very interesting facts. In the eleven states included in this report the number of cases of hookworm diseases treated in 1913 was 186,277. The largest number being furnished by Kentucky, 43,211. North Carolina next with 33,840 cases. The state have the smallest is Arkansas, 4,894. The percentage of infection is startling. In the 413 counties in the eleven southern states, about 43 per cent of the country school children were found infected. In addition to the 186,277 persons, 480,951 persons were examined at an expense to the Committee of $195,900.

The Second Division is given to half tone illustrations of cases.

Practical Medicine Series. General Medicine. Volume VI. Edited by Frank Billings, M. S., M. D. and J. H. Salisbury, A. M., M. D., Chicago, Ill.

This volume is up to the high standard of excellence of this series during the past years, and it will save the reading of many journals in order to gain the same information.

The first chapter is devoted to the description of the theory of immunity and the production of antobodies and antigens and their use in employing serums and vaccines.

This is followed by a discussion of the uses of stock vaccines and of autogenous vaccines giving the consensus of opinion as to the indications for each and the limitations of their use.

It is of great benefit to the general practitioner to have such a summing up of the question.

Radium and Radiotherapy. Radium, thorium and other radio-active elements in medicine and surgery. Wm. S. Newcomet, M. D., Philadelphia, Lea & Febiger, Philadelphia, 1914.

So much is now heard concerning radium and radio-active substances, so much is claimed for these things that any practitioner should be reasonably well informed as to their value. Dr. Newcomet has here presented in a concise form the present knowledge. After a chapter on the history of the developement of radio-activity, the general subject is treated under the chemistry and physics of the Radio-active Elements, and Physiology and Therapeutics. Altogether a very readable and practical treatise, and one which you should have.

The Clinical History In Outline: P. G. Woolley, S. B. M. D. (St. Louis, C. V. Mosby Co., 1914).

This little book of 53 pages is intended as a reminder to the medical student, of the points to be considered in taking a clinical history and in making a physical examination. Any general practitioner without a good previous training would glean a lot of valuable information by having it at his elbow when face to face with a difficult case. One can recognize the influence of Osler upon the author's methods of approach. —C. P. H.

Blood Pressure Primer. The sphygmomanometer and its practical application, by Dr. F. A. Faught, 5th Edition Published by G. P. Pilling & Son Co.

A very useful book giving the essentials and practical application of the blood pressure instrument.

DEATH OF JOSEPH D. BRYANT, M. D., L.L. D.

The death of Dr. Bryant removes an interesting character from the medical profession. Dr. Bryant was well known to the profession through his many contributions to surgery. His most valuable contribution, no doubt, is Operative Surgery in two volumes. There is another side to a professional man's life that is well worth considering aside from his contributions to his profession. It was the privilege of the writer to have known Dr. Bryant in a somewhat intimate manner. It was interesting to meet Dr. Bryant in a social way as well as in a professional way. His genial manner and warm consideration for members of the medical profession, particularly his friends, was an inspiration which one rarely gains from personal intercourse with men who have reached a high position in the councils of the profession.

Dr. Bryant enjoyed a long line of distinguished ancestry, but was himself a farmer's boy, born in East Troy, Walworth county, Wisconsin, March 12th, 1845, son of Alonzo Ambrose and Harriet Atkins Bryant. His ancestry on both sides was of English origin, the Bryant genealogy having been traced from 1450, when various members were knighted for bravery in the wars of that period. On his mother's side the Atkins family traced back to the holy wars of the Crusaders.

Dr. Bryant received his preliminary education in the common schools in the vicinity of his native town, and worked on his father's farm during the summer. He afterwards attended High School and Norwich Academy. He began the study of medicine with Dr. Geo. W. Avery, and in 1866 entered the Bellevue Hospital Medical College, from which he graduated a Doctor of Medicine in 1868, and received the degree of L.L. D. from the New York University in 1907. He was an interne at Bellevue Hospital from 1869-1871. From that period until the consolidation of Bellevue Medical College and the New York University Medical College in 1897, he held various teaching positions in Surgery. From the date of the consolidation of the two schools until his death he held the position of Professor of Principles and Practice of Surgery in the combined institution. Dr. Bryant held many positions of honor on medical commissions in the city of New York. He was Surgeon with the rank of Major in the 71st National Guard, New York, 1873 to 1882, Surgeon General with the rank of Brigadier General on the staff of Governors Cleveland, Hill, and Flower. He will be remembered as President Cleveland's physician, and attended President Cleveland on many occasions. Dr. Bryant was Chairman of the Committee on National Incorporation of the American Medical Association of which the writer had the honor of being a member. For two years this committee through its chairman worked strenuously to secure recognition by Congress. The sub-committee of the Committee on Judiciary of the House of Representatives of the 58th Congress, regarded the bill as unconstitutional, particularly the clause "to hold or convey real estate and transact business anywhere in the United States." In consequence of this failure to obtain a national incorporation, the American Medical Association secured a charter issued by the state of Illinois.

Dr. Bryant was married in Bath, New York, September 28th, 1874 to Annette Amelia, daughter of Samuel and Jane Crum. He had one child Florence Annette, wife of Frederick Augustus de Peyster.

Dr. Chas. Enfield died at his home in Jefferson, May 7th, 1914, of pneumonia. Dr. Enfield was born in Galway, Ireland, Aug. 21st, 1841. His parents were unable to give him many educational advantages. During his earlier years he attended a sectarian school of the Church of England, at Galway, and was confirmed in the Episcopal faith. Later he was "bound out" to an apothecary with whom he served for some time. He became

dissatisfied with this employment and sailed for America. He landed in New York on the day that Fort Sumter was fired on. Having less than $15.00 in his pocket, he determined upon enlisting for service in the war, and joined the First New York infantry. His regiment was sent forward to Virginia, and not long afterwards he was taken prisoner and confined in Libby prison. His knowledge of pharmacy was soon discovered by the Confederate surgeons in charge of the prison, and he was employed as an assistant to the surgeon in caring for the Union prisoners. Dr. Enfield was aware of the contemplated tunnel delivery, and knew the facts connected with it. He declined to escape and was soon after exchanged. Dr. Enfield again joined the First New York regiment, but was detailed to the position of Steward in the army hospital at Baltimore.

Dr. Enfield

Near the close of the war Dr. Enfield joined a regiment that was sent to New Mexico to take the field against some very troublesome Indian tribes. He was located at Fort Union as assistant to the Post Surgeon. While at Fort Union Dr. Enfield had the distinction of rendering medical aid to the famous war and Indian scout "Kit" Carson, who at the time was suffering from tuberculosis, and died near there in the year of 1868.

In 1868 Dr. Enfield left Fort Union for New York and matriculated at the New York College of Physicians and Surgeons, now the Medical Department of Columbia University.

In 1870 Dr. Enfield located in Jefferson, and with the exception of a short time during which he was in practice with Dr. Park of Grand Junction, he resided in Jefferson the entire period of his professional life.

February 25, 1875 Dr. Enfield married Miss Josephine Eldon with whom he lived for 34 years or until her death in July 1909. The only survivor of this family is Dr. O. D. Enfield, who, for several years, has been associated with his father in local medical practice.

Dr. Enfield was again married, on September 1, 1910, to Miss Minnie A. Witter, of Jamaica, who now survives him.

Dr. Enfield was especially distinguished for his knowledge of medicine and his accurate scholarship, especially remarkable in view of the fact that the Doctor had very little literary training, and the knowledge which he gained in subsequent years was the work of close application. Not only was Dr. Enfield a close student of medicine and surgery, but he was also a close follower of the political events of the day. He was also a student of English literature and of English medical history. He was always proud of his library which was extensive and well selected.

It was the privilege of the writer to have been rather intimately associated with Dr. Enfield from 1874 until the time of his death. We were often associated in the care and treatment of medical and surgical cases, which gave us an opportunity to measure Dr. Enfield's knowledge and skill as a diagnostician and practitioner.

Dr. Enfield was one of the charter members of the Central District Medical Association, and its first secretary. He was a member of the Iowa State Medical Society, the American Medical Association, the American Association for the Advancement of Science, the Medical Congress of Clinical Surgery, the American Ophthalmological Society. The last time that we had the privilege of meeting Dr. Enfield was in Albert Hall in London where he was attending the Ophthalmological Section of the International Medical Congress.

Of the group of medical men that met in Dr. Allaman's office in Boone in 1874 to organize the Central District Medical Society, Dr. Enfield was one of the last to close his medical career. Only two or three of that group are still living.

The forty-third annual meeting of the **Des Moines Valley** Medical Association met in Ottumwa, Thursday, July 2nd, at 9:30 A. M., in the courthouse.

Business session and reading of papers was the order of business until twelve thirty o'clock when promptly the members, visitors and ladies went to the First Congregational church, where luncheon was served.

Program.

Invocation ..... Rev. Malcolm Dana
1. Myologenous Leukemia ..... D. C. Brockman, Ottumwa
2. Empyema, Early Diagnosis and Treatment.. C. B. Taylor, What Cheer
3. President's Address ..... F. M. Fuller, Keokuk
4. Paper ..... S. K. Davis, Libertyville
5. Etiology, Diagnosis and Treatment Hodgkins Disease .... C. P. Howard, Iowa City
6. Goitre ..... C. H. Magee, Burlington
7. Intussusception ..... E. B. Howell, Ottumwa
8. Modern Treatment of Syphilis ..... W. P. Sherlock, Keokuk
9. Importance and Value of Clinical Histories .. C. A. Boice, Washington
10. Chronic Myocarditis ..... J. S. Gaumer, Fairfield
11. Corneal Ulcers ..... C. J. Lukens, Albia

More than eighty physicians were in attendance. All the essayists were present excepting two.

Dr. Fred Bowles was elected president, Drs. Wm. Downing and M. F. Moore were made vice-presidents, and Dr. E. B. Howell of Ottumwa secretary and treasurer. Censors elected were Moses Childress, C. H. McGee and C. S. James.

Annual Meeting: Medical Society of the Missouri Valley.

Colfax Springs and Des Moines, Iowa, will entertain this society on the occasion of its twenty-seventh annual meeting, September 17, 18 and 19, 1914, under the auspices of the Polk County Medical Society. On Thursday and Friday the scientific sessions will be held in Colfax Springs, 25 miles from Des Moines, where the members will be quartered in the palatial Colfax Hotel, and meetings will be held under the same roof. On Saturday, Des Moines will entertain the society and a series of interesting clinics will be held. Sunday will be spent in Colfax Springs by many of the members who will be accompanied by their wives and daughters. Special arrangements are being made for ladies, as well as special rates. Room reservations should be made early, as a large attendance is assured.

Flavel B. Tiffany, President, Kansas City.

Chas. Wood Fassett, Sec'y, St. Joseph.

The **Iowa and Illinois Central District** Medical Association met at the Outing Club, Davenport, Iowa, Thursday, July ninth.

Officers: President, P. A. Bendixon, Davenport; Vice-President, F. H. Gardner, Moline; Secretary, L. W. Littig, Davenport; Treasurer, F. H. First, Rock Island.

Program at 2:30 Sharp.

1. Chronic Intestinal Stasis with Reference to the Use of Paraffin Oil (15 minutes) ..... Dr. H. Beam, Moline
2. Notes on Some Recent Investigations of the Streptococcus Group ..... Dr. J. D. Blything, Bettendorf
3. Potts Fracture by Inversion and Report of Two Cases (15 minutes) ..... Dr. E. B. Gilbert, Geneseo
4. The Cause and the Prevention of Abdominal Adhesions .... Dr. A. M. Pond, Dubuque
5. The Treatment of Puerperal Fever ..... Dr. H. M. Stowe, Chicago
6. Syphilis of the Aorta ..... Dr. Robt. B. Preble, Chicago
7. President's Address ..... Dr. P. A. Bendixon, Davenport

The **Appannoose County Medical Society** met on Wednesday the 24th inst. at their room in the Drake Free Public Library.

Dr. C. S. Hickman presented a paper on "Indication for Forceps," and Dr. C. S. James on the "Indications for Caesatian Section."

The last meeting proved a very interesting one. Dr. Wayne Harris presented in a very able and instructive way, a case of "Pellagra," and Dr. E. E. Bamford brought before the Society an interesting case of "Fracture of the Fore-arm, with other injuries." The fracture had been plated and this brought out an interesting discussion as to the indications for and limitations of bone plating.

The regular meeting for June of the **Polk County Society** was held on the 16th of the month with the following program:

"Some points in the diagnosis of Diseases of the gastrointestinal tract". . . . . Dr. Frank E. Foulk.

"Barber itch", ... Dr. J. W. Bailey.

On June 25th, this Society held a special meeting with this program:

Medical Aspects of the Iowa Compensation Act.

Henry Sampson,
Assistant Attorney General.

Medical Phases of Arctic Exploration, ... Frederick A. Cook, M. D.

As a pleasing diversion, Harger & Blish furnished entertainment with The New Edison Diamond Disc Phonograph.

Freemont County Medical Society on June 17th, 1914, met at Tabor. Program.

Subject: Typhoid Fever.

1. Etiology and Prophylaxis, ... Dr. Wm. Kerr, Randolph.
2. Pathology and Diagnosis, ... Dr. Ralph Lovelady, Sidney.
3. Symptoms and Treatment, ... Dr. A. E. Wanamaker, Hamburg.
4. Complications and Sequelae, ... Dr. C. E. Hoover, Hamburg.

General Discussion opened by Dr. S. C. McKitrick, Tabor.

Report of State Meeting, ... Dr. B. B. Miller, Tabor.

The meeting was a good one and this Society will meet again in September.

Dr. D. S. Fairchild was elected First Vice-President of the American Medical Association at the recent meeting in Atlantic City. This is an honor well deserved. For more than forty years Dr. Fairchild has been one of the most active members of the Iowa State Medical Society, and many years a leading worker in the A. M. A. He has served very acceptably on several committees and has always been untiring in his efforts to improve the profession. His work in and for the Iowa State Medical Society needs little comment, for it is well known. Ever since the organization of the Defense Department, he has been chairman of the committee and for the past three years editor of the Journal. Dr. Fairchild's influence has always been for the betterment of the profession. The American Medical Association honors itself in honoring Dr. Fairchild. C. A. B.

The June meeting of the **Greene County Society** was held at Jefferson on the 4th day of June. An address was given by Dr. C. E. Ruth of Des Moines, on Common errors in Gall Tract Surgery, illustrated with lantern slides. An interesting talk was given by Mayor Lovelady, an The New Sewer System. Several physicians from Carroll were present.

New and Nonofficial Remedies.

Since publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Sodium Biphosphate, Squibb.—This non-proprietary form of sodium

acid phosphate has been accepted for inclusion with New and Nonofficial Remedies. E. R. Squibb and Sons, New York (Jour. A. M. A., May 2, 1914, p. 1401).

Normal Horse Serum with Chloroform as a Preservative.—Marketed in vials, each containing 50 cc. H. M. Alexander and Co., Marietta, Pa.

Normal Horse Serum without Preservative.—Marketed in vials, each containing 50 Cc. H. M. Alexander and Co., Marietta, Pa., (Jour. A. M. A., May 2, 1914, p. 1401.

Erepton.—A meat product consisting largely of the amino-acids produced by the digestion of meat. Erepton is said to be useful in cases in which it is necessary to substitute a perfectly digested food for the product of natural digestion in cases of gastric or intestinal indigestion and for the purposes of rectal alimentation. Farbwerke Hoechst Co., New York (Jour. A. M. A., May 16, 1914, p. 1559).

Acne Serobacterin, Mulford. This is a sensitized acne vaccine. H. K. Mulford Co., Philadelphia, Pa.

Coli Serobacterin, Mulford.—This is a sensitized coli vaccine. H. K. Mulford Co., Philadelphia, Pa.

Neisser Serobacterin, Mulford.—This is a sensitized gonococcic vaccine. H. K. Mulford Co., Philadelphia, Pa.

Pneumo Serobacterin, Mulford.—This is a sensitized pneumococcic vaccine. H. K. Mulford Co., Philadelphia, Pa.

Staphylo Acne Serobacterin, Mulford.—This is a sensitized staphylo acne vaccine. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., May 16, 1914, p. 1559).

New Bornyval.—New bornyval is borneol isovaleryl glycolate, the isovaleryl glycolic acid ester of borneol. Being more resistant to the gastric fluids than bornyval, it passes the stomach unchanged and is said therefore to be less irritating than bornyval. Its properties are similar to those of bornyval and other valerian preparations. New bornyval is an almost tasteless and odorless liquid, insoluble in water. It is sold also in the form of Bornyval Pearls, each containing 4 minims of New Bornyval. Reidel and Co., New York (Jour. A. M. A., May 1914, p. 1637).

Propaganda for Reform.

Valentine's Meat Juice.—Four years ago an examination by the Council on Pharmacy showed that Valentine's Meat Juice was not a meat juice, but had the character of a meat extract instead, while on the basis of the claim that it was a meat juice extravagant assertions as to its nutritive value were made. The product being a meat extract, was practically devoid of nutrient qualities. As Valentine's Meat Juice is still widely advertised the Council deemed a re-examination important. This re- examination shows that in general it has the composition now as then, and that the same unwarranted claims are still made for it. (Jour. A. M. A., May 2, 1914, p. 1418).

Pituitary Extract.—The use of pituitary extract as an oxytoxic must be considered in the experimental stage. A large number of cases have been reported in which effects from the use of various pituitary extracts (including pituitrin) were obtained. (Jour. A. M. A., May 2, 1914, p. 1420).

Pa-pay-ans (Bell) now Bell-and-Bell and Company announce that Pa-pay-ans (Bell) is in the future to be known as Bellans. An examination of Pa-pay-ans (Bell) made by the Council on Pharmacy and Chemistry having failed to demonstrate the presence of papain. it is probable that the change of name was decided on to escape prosecution for misbranding. (Jour. A. M. A., May 9, 1914, p. 1492).

(To be Continued.)

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A large part of the troubles of infant feeding has been shown to be due to the ingestion of milk sugar or cane sugar.

MEAD'S DEXTRI-MALTOSE

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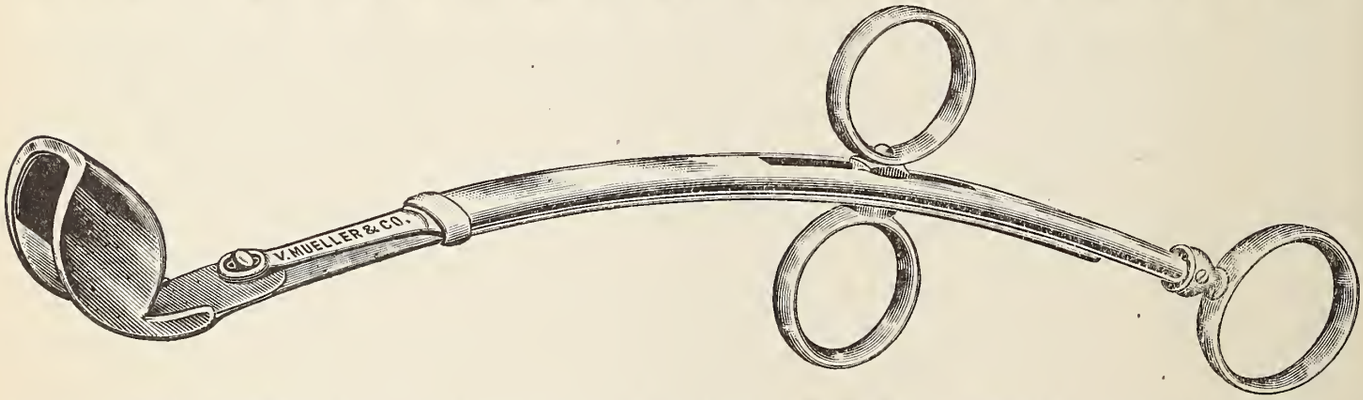

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CHAIRMAN'S ADDRESS

JOHN V. LITTIG, M. D., Davenport.

Section on Ophthalmology, Otology, Rhino-Laryngology. Iowa State Medical Society, May 14, 1914.

I presume that the logical topic for a chairman's address before this section is a summary of the recent advances in ophthalmology, otology, rhinology and laryngology, but I have chosen rather to say a few words about a part of our work that I feel has been too much neglected.

We lay great and proper emphasis upon the necessity of the early correction of abnormal, defective and diseased conditions in the ear, eye, nose and throat in order to prevent and to remedy the vast train of evils following their neglect, but we have done comparatively little to prevent the occurrence of the conditions themselves. In other words, we have not applied the modern conception of medical practice to our specialty.

It is true that the oculists have done noble service in the prevention of blindness from ophthalmia neonatorum, and in consequence every obstretrician worthy of the name now uses prophylactic measures to prevent infection of the eyes of the new born, and, while various other facts and procedures of untold worth have been presented to the world by men in our work, we men have a duty to perform in our own various communities, which, while devoid of chances of renown or even a fair degree of credit, will nevertheless be of great benefit to our fellow beings.

How many of you know whether the type in the books your children and the children of your neighbors read in school is ten point or not; the length of the lines; the distance between the lines; and

the kind of paper; the lighting of the school room; and the various other school items that have to do with vision?

As you all know the human emmetropic eye is not naturally adapted for doing sustained close work. A little child enters school and whether the work be that of the kindergarten or that of the ordinary school room, he uses his eyes hard; for a child uses his eyes about as hard in trying to draw a straight line as an adult does in the most minute daily task. The child is expected to co-ordinate skillfully with his eyes before he has learned to do so with his feet or hands. Speaking in terms of microscopy he is expected to use the oil immersion before he has learned the use of the low power.

Risley has said that, "given an emmetropic or normal eye, the probabilities are that no harm will come to it from the educational process. On the other hand, given an eye with an anomaly of refraction, especially astigmata, the probabilities are, other things being equal, that the educational process will be fraught with pain and danger to the eye."

This statement from such an authority makes two things imperative—the avoidance of educational methods and articles causing an undue amount of eye work, and the early recognition and correction of errors of refraction through early and repeated examination of childrens' eyes.

Percentages of children with defective vision in various cities in this country have been given after the examination of the eyes of school children—children ranging from 5 to 15 years of age. In Davenport the public schools have a percentage of 14, that is, 14 per cent of the children have defective vision with or without symptoms of eye strain. These percentages do not differ greatly in other cities. One often hears the statement that our forefathers did not need all these glasses. Our forefathers had no better eyes or eye sight than we have, they probably did have less trouble with their eyes simply because they used them less for reading and near work than we do now. Eye strain has existed almost since man began. (I say "almost," because Adam probably had normal vision, though Eve was undoubtedly "short sighted.") Our present day habits tend to induce eye strain and our present knowledge to diagnose it.

Having mentioned the importance of not abusing the eyes of children and the importance of early discovery and correction of ametropia, I wish to mention another thing brought out by medical inspection of school children. Four per cent of all children wear glasses and still have eye discomfort, and a large number of all children between the ages of 5 and 15 who do procure glasses do not wear them longer than a few months. I do not wish you to think that this condition is peculiar to any one city, it is practically the same from Boston to Los Angeles.

This latter condition emphasizes the need of two things: First: The oculist must explain to child and adult that glasses are prescrib-

ed to prevent eye discomfort, to cure eye discomfort or strain, to improve vision, and to allow the wearer to enjoy good vision without eye strain, without harm to the eyes, and without symptoms of eye strain, as the case may be. Too often one finds a child who says, "I can see just as well without my glasses as with them", the child really means that he can see "just as much", but sometimes he says. "The glasses didn't cure my headache anyway." This brings me to number 2: The need of exact refraction and of exact fitting of frames. In Davenport needy children in the Public Schools who require glasses are provided with them by the Board of Education. The refraction is done without charge by the oculists of the city. I am happy to say that this careful work gives uniformly good results.

Certain individuals to the contrary, we must use a cycloplegic in refracting practically all patients under 30, and in many up to 35 and even up to 50. Cycloplegia in skillful hands is a safe, rational and necessary procedure. Accurate physical measurement is possible only when the value or dimension to be measured is fixed. Not only is the use of "drops" necessary but he who measures refraction must have a full medical training. The papers of Drs. Pearson, Harkness, Patrick, and Franchere show how necessary this training is. How futile to wear several different pairs of glasses for a headache caused by disease of the sphenoidal sinus.

The estimation of ametropia must be accurate. You have all had patients of which this is a sample: A young man suffered with a severe frontal headache, increased by use of the eyes. This man has in each eye 1-4 D. hyperopia with 1-4 D. astigmia, axis 90°—with lenses he is free from headache and all ocular discomfort, without them his discomfort returns. It is a well known fact that patients do not tolerate an altered ametropia caused by an imperfect correction so well as they will tolerate an ametropia of like amount that has existed in the eye without glasses. If a quarter D. sphere and a quarter D. cylinder will relieve headache in one man why should a refraction with an inaccuracy or mistake of like amount be expected to give relief to another? Try wearing a+.25D. cylinder before one eye and a —.25D. before the other, you will doubtless experience great discomfort. We all know that low degrees of ametropia are most likely to cause obstinate headache and other forms of nervous disorders, so why create just as good a cause by inaccurate measurement of refraction.

Inaccuracy is the greatest cause of failure to relieve our patients of the symptoms for which they consult us. One of the greatest evils of inaccuracy is over correction—it causes far more trouble than does a partial correction.

I need not speak of the diversified symptomatology of eye strain in different individuals, but it is the duty of oculists to make them known to their fellow citizens, especially their fellow practitioners who are in general practice. You must tell them about these things,

tell them about occular hygiene, prevention of eye strain, the need of accuracy in refraction, tell them you can do accurate refraction, and then show that you can do it, and do it better than those without a medical training. Take infinite pains with your frame work, for the most careful refraction may be negatived by ill fitting frames, and remember that it is good general practice to assume that if a child needs glasses at all he needs them all the time and should wear them continuously.

There are two fundamental etiological factors which contribute to practically all pathological conditions of the ear, nose, and throat: 1. infection. 2. toxic vasomotor paresis usually of infectious origin.

The most complete prevention of infection would be the avoidance of infectious organisms. This is an impossiblity, but it is possible to minimize infection by observation of the rules of hygiene. The normal function of mucous secretion has much to do with the prevention of infection—the secretions entangle the micro-organisms and take them to localities where they do little harm. Local resistance to infection requires a healthy mucous membrane with normal mucous secretion. If you pause to think how this secretion is impaired by derangement of the digestive and nervous systems, constipation, a faulty metabolism, insufficient sleep and exercise, poor food, lack of sufficient fresh air, over-heated and dry school rooms, you will see what I meant early in this paper when I spoke of applying modern preventive medicine in this field.

Next in importance is the arrest of an infection by means of local hygiene, vaccines, washes, etc., and the surgical promotion of drainage and ventilation.

Finally we come to the treatment of the tissue itself, tissue that due to repeated infections becomes peculiarly adopted to reinfection and degeneration; tonsils, adenoids, turbinates, and various forms of lymphoid activity. Who may say how far unchecked lymphoid activity, even though ultimately treated surgically, is later in life concerned in sinus disease, deafness, etc. Certainly sinus disease is frequently found in children of tender years when the children are quite unaware of any discomfort or other symptoms. In view of the work done by Billings, Rosenow, Shambaugh, etc., one is justified in holding but one view of diseased tonsils, or of tonsils prone to inflammation and infection without one single systemic symptom, referable to them. One may read of the massacre of the tonsils (perhaps such things do occur) yet tonsillectomy is a procedure of untold value, and as to its frequency of indication I may say that in my city 16 per cent of the children between 5 and 15 have operable tonsils. The operation of tonsillectomy, just the simple operation where all of the tonsil is removed without removing any portion of the pillars, palate, or uvula has been known and practiced in Davenport for some years.

Why a man should advocate partial removal of tonsils at this stage of medical progress is beyond my understanding. To our shame a few men in our own field of practice not only advocate but practice it. Any tonsil requiring operative treatment is at least a grave potential danger to the individual that has it, it can do no good, and either has done, or will do harm. There is no such thing as a clinical distinction between the diseased and normal parts of tonsils. Partial removal decreases the chances of the individual procuring proper tonsil surgery; hurts the standing of proper tonsil surgery because it allows too many persons to say that their tonsils have "been removed" without benefit to them, and it hurts the operator who practices it.

I have heard it said that 7 per cent of the people in the United States patronize dentists, what the percentage of those who patronize oto-laryngolists is I do not know, but judging by what is not done it must be a small one. When adenoids are removed every vestige of hypertrophied lymphoid tissue in the naso-pharynx must be taken so far as is possible, and if the palate is high and the arch contracted, the operator has by no means done his duty until he has told of the work of the dentist so often required to supplement the adenoid operation, and of the fact that an adenoid palate is frequently caused by sleeping on the back, allowing the jaw to fall and the cheeks to press against the growing arch. You must explain the beneficial effect of a widened arch and lowered palate upon the nose, you must tell your patient what should be done, and when. We must not overlook the most intimate connection between the condition of the teeth and disease in the upper respiratory tract.

To go back to my starting point, there is much that you can do to prevent eye strain and disease of the ear, nose and throat if you will but interest yourselves in the hygiene of childhood in the schools and homes; in the schools mainly, for whatever begins there ultimately enters the home. If you will decry the bugaboo of weather-phobia and over-heated houses, if you will tell your people of the great importance of the very early discovery and correction of defects and ailments in the special organs in which we are interested, and if you take the greatest of pains in the correction of these conditions, then will our field of medicine become truly modern, we will in a measure cease to be general repair men, we will become preventors of disease.

THE CONSERVATION OF HEARING*

T. U. McMANUS, M. D., Waterloo.

Without attempt at persuasive argument we will agree that the conservation of hearing is the highest function of the aurist. The common indifference to the prevention of deafness baffles defense. Impaired hearing is so common that many think it of small consequence and unavoidable. Nearly everybody knows that the early removal of tonsils and adenoids will conserve the hearing. This knowledge is so common that it is not respected.

For present purposes I shall divide this subject into three divisions. 1st—Those with normal hearing who have pathological conditions liable to produce defective hearing. 2nd—Those whose hearing has become defective but normal hearing may yet be approached. 3rd—Those whose hearing cannot be improved.

Preventive measures. Removal of adenoids and pathological tonsils before the eustachian tubes become infected will prevent more than 95 per cent of all deafness, according to recognized authorities. Adenoids must be considered as present in every child until you have proved their absence by digital examination. Nasal breathing should never be considered to exclude adenoids.

It is the adenoids in the fossa of Rosenmuller that does the damage to the eustachian tubes, and the amount of adenoids may be so small as to permit perfect respiration. On the contrary a large mass of adenoids in the median line may completely obstruct nasal breathing but go on indefinitely without endangering the ears. Therefore it must be assumed that adenoids are present until the examining finger has palpated each fossa and proven their absence.

Examination of school children. Like all advance in preventive medicine the co-operation of the laity is of great importance. The examination of school children, incomplete though it may be, will go far in preventing loss of hearing. But far better than that, it will educate parents to sense the danger and look for relief before the child enters school. The teacher will teach the children and the children will teach the parents; so eventually the baby in arms will reap the benefit.

Early diagnosis. Every family physician should know that his little patient does not have adenoids or diseased tonsils, as exactly as he knows him to be free from fever or hernia. The laity have a right to feel as badly treated when their doctor overlooks these throat conditions, as were he to overlook a heart lesion or a dislocated hip joint. Not cure but prevention is the acme of professional attainment.

Deafness amendable to treatment. The second class for consideration is comprised of those who have passed beyond the first

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*Read by title before the Section on Ophthalmology, Otology and Rhino-Laryngology. Iowa State Medical Society, Sioux City, May 14, 1914.

class untreated. Their hearing is below par; at times worse and better. Some have wet ears with ruptured drums. Discomfort a little less than pain is common. The drum head may be a little retracted.

In this class the congestion has advanced into the eustachian tubes and they are occluded at intervals. Hypertrophied turbinates and deviated septum often join the adenoids and tonsils in making the pathology of this class. These patients should be treated like those of the first class plus the correction of nasal pathology, keeping in mind that drainage and ventilation must be established with the minimum sacrifice of tissue. Many cases of impaired hearing will improve or entirely recover with the foregoing treatment, but others in whom the tubotympanic congestion is pronounced will demand further consideration.

The depression of the drum head will indicate the amount of disturbance, and the ease with which the ear can be inflated will indicate the prognosis. If we remember that the drum head is depressed and vessels enlarged because of the partial vacuum produced by the absorption of air in the tympanic cavity, we have the key to the rational treatment, which is to replace the air pressure inside the tympanic cavity and at the same time minimize the danger of introducing infection. For several years I have practiced in selected cases, introducing into the eustachian tubes a couple drops of 25 per cent argyrol solution by means of the catheter and air pressure, and without exception audition has been increased, tinnitus lessened and tympanic depression improved. No bad results have appeared in any case and several of the milder cases have regained perfect hearing.

Those whose hearing cannot be improved. Waht shall we say about those whose hearing cannot be improved? The custom seems to be among reputable practitioners to discourage these patients, and I wish to condemn the custom. As a class these patients are self centered and unhappy. They complain not nearly so much of the impaired hearing as of the noises. Their hearing can be helped but little if at all, but the ringing and other noises can be improved materially by massage and inflation, except in those cases due to arteriosclerosis. If they can thus be made more comfortable, why not treat them on the same basis as any other unrecoverable disease?

It is very unfortunate that the successful treatment of impaired hearing is commonly considered to mean nothing less than an improvement of hearing, forgetting that to hold what we have may be a decisive victory. The progress of the symptoms can be stayed if not halted in all these cases that will lead their co-operation in systematic treatment.

General considerations. There are several considerations germane to the treatment of nose and throat conditions when considering the conservation of hearing.

Adenectomy. Of first importance is the thorough removal of

adenoids. There is no other operation in all surgery that is so badly and ineffectively done in so large a percentage of cases as is adenectomy. It is badly done principally because the object is usually to gain breathing space; and that result can be effectively accomplished without giving a particle of protection to the eustachian tubes. It is also badly done because often attempted under local anesthesia. To be thorough the patient should have ether, chloform or gas and the adenotome followed by the gauze covered finger to make certain to macerate all adenoid tissue in each fossa.

Tonsillectomy. This, also, should be done right or not at all. Much has been said in criticism of the incomplete removal of tonsils. Whether or not the tonsil is completely removed is of secondary importance as compared to the mutilation of the pillars. In a routine examination of detonsiled throats you will find two pillars mutilated for every one intact. The frequent result is a distress that causes a coughing or clearing of the throat, producing a greater pharyngeal congestion than the tonsillectomy has invoked or relieved. This is the penalty resulting from the emphasis placed on the completeness of tonsillectomy. It is now time that we emphasize the preservation of the pillars.

Correction of nasal deformities. Restoration of nasal breathing is important but in our zeal we should never forget that it is highly essential to retain all mucous membrane consistent with drainage and ventilation. Crowding turbinates should not be sacrificed if adjustment can be made by straightening a deviated septum. Clipping of middle turbinates will frequently be necessary, but the inferiors will practically always take care of themselves after being relieved of the irritating overflow caused by the crowding above. The lower turbinates should never be cut or cauterized until correct measures above have been exhausted and have failed.

In conclusion:—

1st—Adenoids exist until proven to be absent.
2nd—Audition can be conserved by treatment.
3rd—Nose and throat surgery is essentially thorough or inefficient.

INTRACRANIAL PATHOLOGY AND FUNDUS CHANGES*

G. F. HARKNESS, M. S., M. D., Davenport.

The fundus changes accompanying intracranial pathology concern themselves principally with the optic nerve. Such changes however do not always assume the characteristic picture of papillo-edema: optic neuritis and neuro-retinitis demand differentiation and do not always occur as separate conditions and the picture may appear as a combination of the three. Psuedo-neuritis likewise is to be eliminated as a factor before coming to any conclusions.

Pathologists are not of one accord as to how the so-called choked-disc is caused, and in its earliest stages it is rarely available for microscopic examination. No matter how one reasons, the increase of intracranial pressure stands out most prominently as a factor. While the condition from this source is primarily an edema it does not necessarily remain so, in fact as a rule it does not do so if the condition is allowed to continue for any length of time.

The skull has a fixed capacity, the brain substance is incompressible and the normal change in the quantity of cerebrospinal fluid is too small to be considered and it is of importance only as a lubricant. Supra-venient material, solid or fluid added to the contents of the cranial cavity, forms the chief cause of papillo-edema. Malignant growths, inflammatory deposits and blood clots are among the solid forms and the cerebrospinal fluid increased in amount and altered in chemical composition are among the fluid.

In early cases of papillo-edema the lamina cribrosa is almost always bowed forward, but it also returns to a normal position during the atrophic stage. The distention of the vaginal space is not a constant factor: Kampherstein in Uhtoff's series of 51 cases and Elschnig in a series of 26, showed that it was present in about 65 per cent of cases. Inflammatory changes in the sheath spaces are present in about 75 per cent of cases (Kampherstein) and always present when the condition has progressed to atrophy. In 56 per cent of the cases of typical papillo-edema the nerve itself shows inflammatory changes. The edema in the optic nerve is interfascicular and only more rarely accompanied by an intra-fascicular edema.

Von Graefe's theory that a tumor either directly or indirectly caused pressure on the cavernous sinus, thereby causing congestion of the ophthalmic and central vein of the retina has been rather successfully controverted by Seseman who directed attention to the anastomoses between the ophthalmic vein and the veins of the face.

Schwalbe demanstrated the continuity of the subarachnoid space with the vaginal space of the optic nerve and on this basis. Schmidt-Rampler theorized that distention or impeded lymph flow

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caused the pressing of fluid into the lamina cribrosa. Manz accepted this theory only so far as the pressure compressed the vessels. The various mechanical theroies failed of unanimous support and Leber, Deutschmann, and others favored an inflammatory theory of causation. Various types of vaso-motor theories have been advanced.

The remarkable relief following the lowering of increased intra-cranial pressure in certain cases of typical and even atypical papillo-edema makes the solving of the problem most interesting. It seems probable that ultimately we will recognize not one cause alone but first a mechanical one and added to that a chemical one. Certainly the work of recent years as originated by Loeb and elaborated by Fischer, Kopetzky and some others as to the behavior of the tissues, the so-called hydrophyllic colloids and their ability to absorb water following a reduced oxygenation seems applicable here. A slight increase in pressure at the lamina cribrosa, compressing the capillaries, with a resultant increasing anemia followed by greater edema until finally the larger vessels suffer compression. The atrophy, disintegration of nerve fibers which are followed by the return of the lamina cribrosa to a normal position, gives to this chemical factor even great prominence.

In trying to ascertain the cause of the trouble our first differentiation is with the ophthalmoscope but it alone is not conclusive and is without any positive value as regards cerebral localization. The pseudo-neuritis we dismiss; the obscurred disc margins are never accompanied by a peri-papillary edema, the visual fields are normal and the diminution of vision and irritative retinal signs, such as slight reddening of the disc and broadening of the veins are accounted for by the refractive error present.

Not all cases of papillo-edema are typical. We rarely have the opportunity of following these cases from their inception. Central vision suffers so little impairment in the early course of the typical cases that some time elapses before attention is directed to the eyes.

There is first a beginning redness of the disc and a blurring of its upper and lower margins followed by an involvement of the nasal side with the temporal margin remaining clear. Then follows the blurring of the temporal margin of the disc, a filling in of the physiologic pit and the beginning elevation of the nerve head and an uneven distention of the veins. Shortly after the beginning one notes the peri-papillary edema or haze. As the edema increases and the nerve head becomes more elevated, there appears a vascular striation of the swollen tissue and also striae in the retinal area between the disc and the macula. Of greatest import is the markedly increasing distention of the veins accompanied by an actual attenuation of the arteries, resulting in a great difference in relative size between the two. As the process reaches its height, the disc becomes mound shaped, with a precipitous descent to the retina, the arteries

further contracted and the veins bent and broken in appearance as lost from view at intervals in the opaque swollen disc and retina. Exudates often accompanied by hemorrhages appear. The arteries are mere threads and hardly discernable in places. As the process recedes one notes a marked thickening of the perivascular lymph sheaths, the intense vascularity subsides and pallor increases. Degenerative areas become manifest and in the macular region the radial striations may resemble the renal type. The end result is that of atrophy, connected vessels, streaks running along their margins, reappearance of the margins of a now atrophied disc and retino-chorioditic patches of degeneration. To follow such a picture the diagnosis offers no difficulties but this we rarely can do.

Also the case that in its post-operative results following decompression gives a beautiful demonstration of the relief afforded by the lowering of intracranial pressure, may not present the typical picture of papillo-edema but rather one easily to be confused with an optic neuritis. In optic neuritis there is little or no elevation of the nerve head, the veins are broad and tortuous, but the arteries suffer little change. The vision suffers an early impairment and hemorrhages are of rather rare occurrence. In neuro-retinitis the principal differentiation is necessary as regards albuminuric retinitis, and the well known classical picture as caused by this condition may be so changed as to present an almost typical choked disc.

It is well known that papillo-edema may be quite far advanced without any marked diminution of central vision while in neuritis, the inflammatory type, central vision is affected early. However this rule is not constant for during the past year I operated upon a case with typical papillo-edema and an early diminution of central vision, which in its post-operative behavior exhibited the typical clinical characteristics of papillo-edema, vision returning to normal and the nerve head regaining its former appearance.

The behavior of the visual fields is an additional diagnostic aid, but is not infallible. In neuritis we expect the extent of the visual fields to be retained while in papillo-edema a concentric narrowing or sector like scotoma involving the periphery. The work of Bordley in association with Cushing in demonstrating the interlacing of the color fields particularly as regards the field for blue has received confirmation from others. This test has been rather disappointing to me and while there may have been a lack of accuracy in the primary colors used, certainly the test is one requiring great care in eliminating the personal equation not only in the patient but in the observer as well.

So with the ophthalmoscope we encounter pathological pictures of the optic nerve, some of which we feel reasonably sure of our differentiation while others are atypical and the natural query arises, since these nerve head changes are not the disease per se but only symptoms, from what conditions do they originate?

Brain tumors stand forth as the principal cause. In Kampfferstein's 200 cases of choked disc 134 were caused by brain tumors and this would have been increased to 170 had brain syphilis and conglomerate tubercles been included. An average of 87 per cent. (Gower's 80 per cent; Oppenheim 90 per cent—100 cases; Annuske & Reich—95 per cent 88 cases; Bruns 84 per cent—31 cases.) of the cases of brain tumor will give typical or atypical papillo-edema. Unilaterally it is very rare from this cause and when so present the growth is generally situated near the chiasma or pressing on one nerve, cutting off the vaginal space, the papillo-edema occurring in the other eye. While the homolateral eye in a slightly larger percentage of cases shows the earliest and greater neuritis or papillo-edema, it is not enough to be of localizing significance. Error in reasoning the localization from this sign is further enhanced because at the time of observation that eye showing the lesser degree of involvement may be in the beginning atrophic stage and was originally the eye first affected and to the greatest degree. The size of the tumor is of no particular import as regards the degree of choked disc. Choked disc from brain tumor increases as the locality of the brain growth moves from the anterior to the posterior pole of the brain and decreases from the cortex in. Ophthalmoscopic changes occur earlier in tumors of the cerebbellum and base and late in the development of tumors of the cerebrum, and especially of the frontal lobe. The tentorium cerebelli affords protection to the basal parts. As regards brain tumor with papillitis, and its probable location.

Cerebellar	Kampfferstein 32 per cent	Subcortical 15 per cent
	Paton 21 per cent	Pons & Medulla 12 per cent
Frontal	Kampfferstein 16 per cent	Optic thalamus and Mid brain 7 per cent.
	Paton 16 per cent	
Parietal	about 15 per cent	
Temporal	Kampfferstein 8 per cent	
	Paton 7 per cent.	

In Paton's 202 cases of brain tumor all tumors of the temporosphenoidal lobe and all except two of the extra-cerebellar showed an optic neuritis. Twelve per cent of the frontal and 14 per cent of the parietal tumors were without any eye signs. Likewise 37.9 per cent of the subcortical growths and 43 per cent of those of the pons show the same. The relative infrequency of papillo-edema in tumors of the pons and of those located subcortically is accounted for by Paton because of the low vascularity and metabolic demand made upon these structures.

Considering syphilis as cause of papillo-edema in
200 cases, Kampfferstein ..12 per cent
50 cases, Schott .....17 per cent

Uhtoff, 100 cases .....14 per cent
Parsons, 150 cases .....10 per cent

13.4 per cent due to syphilis.

The outcome of these cases is unusually favorable, complete restoration as regards function and the eye ground picture may occur. It occurs with the greatest frequency accompanying a gummatous meningitis of the base and it may be the sole sign of a cerebral syphilis.

The most common cause of optic neuritis is syphilis (Adam) and its confusion with papillo-edema is made more difficult because it is this variety that is particularly accompanied by a large amount of peri-papillary edema. With the leutic type we more often get a rapid diminution of central vision even in a characteristic papillo-edema. A rapid onset of visual disturbance with high degree of choked disc and severe pains in the back of the head are indicative of gumma of the cerebellum. Hereditary lues rarely causes an optic neuritis unless associated with meningitis.

In internal hydrocephalus of a chronic nature we get some of the highest degrees of choked disc.

In syphilis the primary inflammation is as a rule in the optic nerve with extension to the meninges while the reverse is true in tuberculosis. In Kampfferstein's 200 cases, tuberculosis was the cause in 4 1-2 per cent, solitary tubercles and one chronic meningitis. Uhtoff states that neuritis is the most common symptom of tuberculous meningitis, 25—30 per cent of all cases, but because of the bad prognosis, occurring almost always in children or young people, attention is not directed to the eyes and the patients do not live long enough to have the diagnosis of the eye lesion established. The diagnosis from the eye lesion unless present in the nerve or choroid is not possible, and is generally made by exclusion and the presence of tuberculous lesions elsewhere. As regards the solitary tubercle—Kraus, 100 cases, 22 per cent were cerebellar and in Kampfferstein's 32 cases, 41 per cent were in the cerebellum. 16 per cent in the frontal lobe. Eighty five per cent of the cerebellar cases showed papillo-edema.

In Kampfferstein's 200 cases, brain abscess was the cause of the papilla-edema in only three and one-half per cent of the cases. Deutschmann has attributed its rarity to the thick capsule which prevents the distribution of phlogogenic material. In 155 cases of brain abscess collected by Kampfferstein, optic neuritis was present 23 per cent and papillo-edema in 33 per cent of the total. The otogenous optic neuritis usually shows little engorgment and hyperemia, little edema of vessel changes. A rapid change in the picture with increase of edema, even without material functional change is indicative of a complication, as sinus phlebitis or an abscess added to an

otitis and immediate operative interference is demanded. The inflammatory eye symptoms may be increased immediately after the opening of a brain abscess, but it is a temporary change and in no way modifies an otherwise favorable prognosis.

Papillo-edema from intracranial hemorrhage due to injury for disease is more frequent than generally credited, because the opportunity to examine these cases is rarely given.

The form of optic nerve disturbance due to abscesses in the orbit and empyemia of the accessory sinuses deserve particular mention because such a cause or causes may produce a large central scotoma in marked contrast to the otogenous form and with little nerve change apparent and again it may assume the typical papillo-edematous form but with central visual disturbance and unilateral in location.

Were all cases of albuminuric neuro-retinitis typical no confusion with such would arise here. However, they are not, and many cases may present the appearance of choked disc. Further, those cases of papillo-edema without nephritis or albuminuria and due to increased intra-cranial pressure may present the classic stellate macular exudates. We know this type of neuro-retinitis to be associated with the contracted kidney of interstitial nephritis and likewise with an unfavorable prognosis. Confusion may arise in some instances. Nearly two years ago I saw a man, past thirty with typical papillo-edema, stellate macular exudates and with a nephritis, apparently of the acute parenchymatous type, albumin being present in large amount and the patient showing symptoms of beginning uremic intoxication. The prognosis was apparently very bad, the man's very appearance indicating an early demise. An old luetic infection was admitted. Rapid elimination by means of sweats and active anti-luetic treatment was instituted. The eye symptoms entirely disappeared and today the man is doing his regular work. The eye condition was of course primarily a luetic one.

Our ideas of a few years ago regarding the classification of kidney affections and blood vessel changes have been revolutionized. We have a neuritis due to anteriosclerotic changes, which is sluggish in its course and the diagnosis is to be made from the slow onset and general symptoms and when at times it assumes the papillo-edematous picture, the difficulties of diagnosis are greatly multiplied.

In one-half the cases of tuberculous meningitis we encounter eye complications, optic neuritis in 25 per cent and choked disc in 5 per cent and in practically all of the latter solitary tubercle of the brain complicates the meningitis (Uhtoff). Literature gives 10 per cent as complicated with choked disc associated with solitary tubercle. In epidemic cerebrospinal meningitis slight papillitis is not uncommon but papillo-edema is rare.

Uhtoff collected 46 cases of choked disc in hyrocephalus, much

less frequent in children because of the expansion of the skull. In cases where the cerebrospinal fluid escapes from the nose, the optic neuritis is absent.

Schmall has reported that in 80 per cent of chlorotics, the vessels appear pale and narrow but that the veins are two or three times as broad as the arteries and that the latter are tortuous Raehlmann in 80 per cent of cases of general anemis reported a marked dilatation of the vessels. Optic neuritis has been frequently reported. However, we must not be misled for we frequently have an anemia in association with an intracranial tumor.

In sinus thrombosis, excluding the otitic and traumatic cases, 20 per cent of the cases show fundus lesions, including optic neuritis and choked disc. Pronounced papillitis is indicative of extensive involvement of the orbital veins. Bilateral exophthalmos and choked disc occur frequently in sinus thrombosis following disease of the sphenoidal sinuses. Thrombosis of otitic origin presents choked disc in 18 per cent of cases (Uhtoff) and fundus changes in 54 per cent of cases. The papillitis first appearing on the same side and continuing more pronounced is here of real diagnostic value.

Time does not permit one to go into detail as to data to be obtained from other observations, extra-ocular, which are of prime importance as regards cerebral localization and material aids in reaching conclusions regarding the intracranial pathology such as the visual fields and the types of hemianopsia; homonymous, bitemporal, and binasal. Involvement of the visual memory centers with definite aphasic symptoms are among the most definite localizing symptoms. Likewise the pupillary reactions are of importance, the significance of the reflex arc, Wernick's pupillary sign, the fact that the center for pupillary action lies remote from the cortical visual centers and paralysis of the third nerve causes paralysis of the pupil of the same side.

Nystagmus after eliminating the aural type is not common but when present is indicative of a cerebellar or pontine lesion. Cortical lesions do not cause paralysis of the eye muscles, with the exception of ptosis. The conjugate paralyses and spasms of the eye muscles are further aids, spastic deviations indicate cortical lesions. In hemiplegia if the eyes look towards the paralyzed side the lesion is pontine, if away it is cerebral. Involvement of the 5-6-7-8- and 12th, nerves on one side and a hemiplegia on the other, is a positive sign of a pontine lesion on the side of the paralysis of the cranial nerves. Certain localities in the brain give a rather definite symptomatology of which we avail ourselves. Tumors below the tentorium give earlier localizing symptoms and all of more rapid development while those above may present only vague cerebral symptoms. No ocular symptoms other than optic neuritis and choked disc are found in tumors of the central convolution, the frontal lobes, region of speech, corpus callosum and cerebral ventricles.

Cushing has given us a beautiful picture of the general symptoms of tumors of the hypophysis and the x-ray often confirms without doubt the causative site.

The beneficent results obtained from the decompression operation are now accepted, the choked disc disappearing in 97 per cent of cases (Finckh & Saenger). The earlier the operation the better the results, hence procrastination is inexcusable, but the clinical type which responds so beautifully following operation does not always give us the typical papillo-edema picture. Particular confusion may arise in the early stages between papillitis, papillo-edema, and albuminuric neuroretinitis. An arbitrary rule regarding the height of the elevation of the nerve head does not suffice.

The first attempt should be to gain an approximate idea regarding the progressiveness of the condition, and not be bound by any rule as to the height of the disc elevation.

Secondly all cases demand a Wassermann test, and with lues as a cause we have hopes of a better prognosis, but are not warranted in unduly extending our specific treatment, when the response to same is not positive and prompt.

The urine should undergo a careful microscopic examination. The simple presence of albumin may be misleading, but casts are indicative of structural changes, renal and arterial, making the prognosis even more unfavorable.

Decompression is a palliative measure, for the relief of a symptom, papillo-edema of the optic nerve. The ophthalmoscopic picture justifies its adoption which should be made without delay, time being a most valuable element as regards the preservation of vision.

Discussion.

Dr. F. W. Dean, Council Bluffs: It is extremely hard to make a diagnisos at times in some of these cases exhibiting papillary edema. It would seem to me that a Wassermann test should be made routinely in most of the cases on the chance that the intra-cranial pressure may be due to some effect of the spirochaete. A decompression operation gives relief in some cases and vision is saved if the optic nerve has not been too much effected before this is carried out.

Dr. Gratiot, Dubuque: In an experience of five cases, three of them being my own the results were so discouraging that I would never resume decompression operations for brain tumor.

Dr. J. C. Beck, Chicago: My personal observation is that the decompression operation is of great value in tumor of the brain in relieving intra-cranial pressure. Choked disk I have found to be only a fairly good diagnostic sign in brain abscesses of otitic origin. I would like to speak of the new test for sinus thrombosis which can be easily demonstrated. It is as follows: In a sinus thrombosis on the right side let us say, if you compress the jugular vein on the opposite side and examine the fundus through a dilated pupil, a mild form of optic neuritis will temporarily result from the compression and as soon as compression is relieved the temporary swelling disappears.

Dr. Harkness in closing: It would seem to me that even a positive Wassermann is no contra-indication against operating. I believe the decompression operation is indicated in spite of Dr. Gratiot's statement. The best men in this line at least continue to do them and with considerable benefit.

UNFAVORABLE RESULTS FOLLOWING GASTRO-ENTEROSTOMY

C. DeJONG, M. D., Fort Dodge.

It is but perfectly human and natural for one to speak of things that are pleasant and agreeable rather than of those that are unpleasant and disappointing. It is more natural for one to speak of his success than of his failures. Yet it is generally admitted that failures and disappointments frequently offer the most valuable lessons, and by constant and persistent application our correct course is finally determined.

Since the first gastro-enterostomy by Wölfer in 1881 the operation has undergone many modifications both in technic and in its applications to conditions. It was at first thought that the operation would relieve or cure many stomach ills, but in course of time it was discovered that the operation had its limitations. And as time has passed, and the operation has been performed for a variety of stomach disorders, on patients presenting a variety of physical conditions, the operation has become more and more restricted in its usefulness. Even today, while we have a wealth of information concerning the experiences of the most competent operators, the operation frequently fails to cure or relieve symptoms; and not infrequently the operation is even followed by the introduction of complications or symptoms which did not previously exist.

I am reminded of a case which occurred in the practice of Dr. V. B. Knott of Sioux City, during the time I was associated with him in which complications arose. This patient had a duodenal ulcer for which a posterior gastro-enterostomy was performed of the "no-loop" variety. His convalescence offered nothing unusual. His condition seemed to be perfect in every respect until after the fourteenth day. He had been up and walking around for a few days and his stomach did not give him any trouble whatever. After the fourteenth day he began to vomit. He was put back in bed and his stomach washed out twice daily or oftener. The vomiting continued; only liquid food was given. On the nineteenth day a second operation was performed. The anastomosis was found in perfect condition and the stoma patent. It was found that the anterior wall of the stomach had become adherent to the parietal peritoneum, thus creating an hour-glass stomach, which interfered very greatly with the motility of the stomach and its proper emptying. After this operation there was no more vomiting and a rapid and complete recovery was made.

Perigastric adhesions not infrequently take place. They are especially liable to occur at the site of a chronic ulcer which threatens to perforate. Adhesions form between this point and the abdominal wall or some neighboring organ. In this way gastric motility is greatly interfered with and the stomach cannot empty itself prop-

erly; this is evidenced by more or less continuous vomiting (Helferich). Adhesions of this kind also frequently cause displacement of the point at which the stomach is attached to the intestine. In this way the proper evacuation of the stomach is not accomplished, and the production of symptoms which did not previously exist takes place.

Drainage: In a number of animal experiments performed by Cannon and Blake with the use of the x-ray, they have found that the greatest intra-gastric pressure is at the pylorus; that the contents of the stomach are in a more fluid state at the pylorus than nearer the cardiac end; and that peristalsis exists to a greater degree at the pylorus than in any other part of the stomach. The most logical conclusion drawn from these facts is that the stoma should be placed as near the pylorus as possible, in order to derive the greatest benefit from the operation.

It is not necessary that the stoma shall be at the most dependent point of the stomach. In fact it is an anatomical impossibility to place the stoma at the most dependent point of the stomach on account of the location of the large vessels. It is also very difficult to determine at the time of the operation what the most dependent point of the stomach is. This is especially true in cases where some degree of dilatation of the stomach exists. For what is the most dependent point of the stomach in the recumbent position is not the most dependent point in the vertical position. In cases where the stoma has been placed relatively high, where there is also pyloric stenosis, and consequently some dilatation of the stomach, there will be no drainage, owing to the fact that the level of the stomach (Hertz) contents in the vertical position is below the level of the stoma. In cases of this kind the symptoms are not relieved, and the results of the operation are not what they were expected to be.

In this class of cases relief is not obtained until the patient assumes the recumbent position. In this position the stoma will occupy a lower level and the stomach contents will have an opportunity to escape.

Kinks: Another frequent source of failures lies in the formation of kinks. A kink develops most frequently at the distal point of the anastomosis; at this point the intestine is more freely movable than at any point between the pylorus and the stoma. At this point peristalsis is at its weakest. A peristaltic wave coming from the pylorus does not continue past the point of anastomosis, but usually ends there because the muscular coats of the intestine have been divided. The peristaltic wave will practically have to re-commence at the distal point of the anastomosis. If a kink exists here it is not easily straightened out because peristaltic pressure can not be brought to bear on this point, consequently the seat of obstruction is frequently here.

If it should be anticipated at the time of operation that a kink

might develop at this point, it might be well to attach the intestine to the stoma, to the stomach for a short distance, and in this way prevent the occurrence of acute angulation.

Too Rapid Drainage: Hertz speaks of another unfavorable result following this operation and the symptoms produced by too rapid drainage of the stomach. It has not been discovered what the causes are that produce this condition. It does not seem to depend upon the location of the stoma. It has been found to take place in cases where the pylorus was patent, and where the pylorus had been obstructed either by disease or by the surgeon by operation. The most pronounced symptom of this condition is a post operative diarrhea which becomes chronic and possesses a great deal of uniformity. The diarrhea is sometimes so severe as to cause death.

The pain or discomfort associated with this condition is probably due to the rapid filling and stretching of the proximal loop. It generally occurs soon after eating, sometimes within ten minutes, and it gradually subsides as the proximal loop empties itself. The diarrhea is due to the irritating effect of the food on the small intestine. As the food leaves the stomach it has not had time to become acidified and digested, and enters the bowel in an unnatural condition. The absence of acidity of the gastric contents accounts for the lack of stimulation of pancreatic secretion, so that the food does not undergo compensatory digestion in the small intestine.

These patients find relief in eating small amounts at a time, and lying down for thirty minutes to one hour after eating. The quality of food does not seem to make so much difference as the quantity.

Bourne has found that in sixty-eight of the cases he has been able to trace, the condition in forty-three per cent, from two to five years after operation, was very good; and in thirty-eight per cent it was hopelessly bad. He finds that cases of duodenal ulcer do very much better than cases of gastric ulcer.

From the foregoing the natural conclusions arrived at are that the operation is becoming more and more restricted in its usefulness. And in the experience of most men there is always the possibility that unfavorable results of some kind may develop, even in cases where the operation is positively indispensible.

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A SPECIFIC TREATMENT FOR LUPUS AND OTHER PARASITIC LESIONS OF THE SKIN

J. W. KIME, M. D., Fort Dodge, Iowa.

Situated as they are, immediately upon the surface of the body where they may be seen and where medical substances may be directly applied to them, the lesions of the skin are, theoretically, those most easily to be treated and controlled of any of the manifold diseases upon which the physician is called to treat; practically, however, they are the most obstinate of all and yield to treatment,

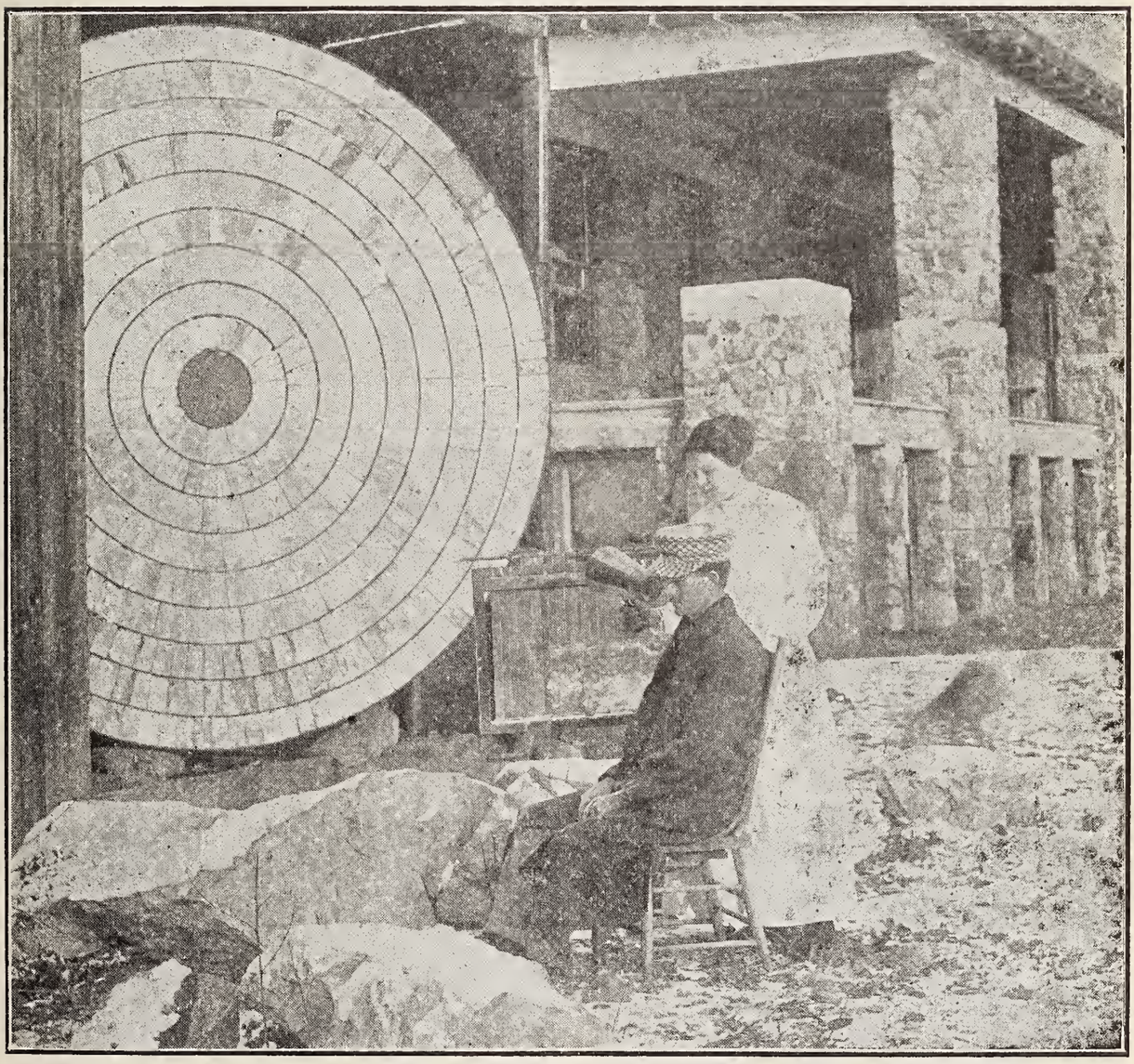
if at all, only after the most tedious and prolonged course of treatment.

It is self evident that in lesions of the skin due to parasites of any kind, whether vegetable or animal, if we may destroy the parasites without injury to the normal tissues about the lesions, healing will readily take place in the same manner as after simple injuries and abrasions of the skin. It is along this same line of reasoning that we have attempted to proceed ever since the discovery of para-

sitic agencies for many of these grevious affections. Our failure has been almost complete.

It was Finsen who first called attention prominently to the use of sunlight in the treatment of lupus and his success was such that this agency has found an enduring place in the treatment of this disease.

In the use of the ultraviolet ray, however, the treatment is most prolonged and cures are effected only after long periods of treatment.



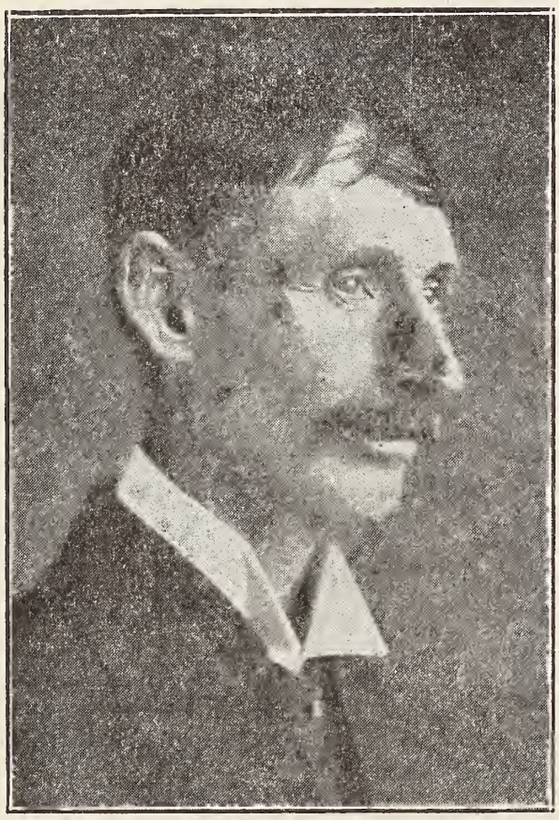
Many of Finsen's cases were under observation for a year and more of them for much longer periods of time.

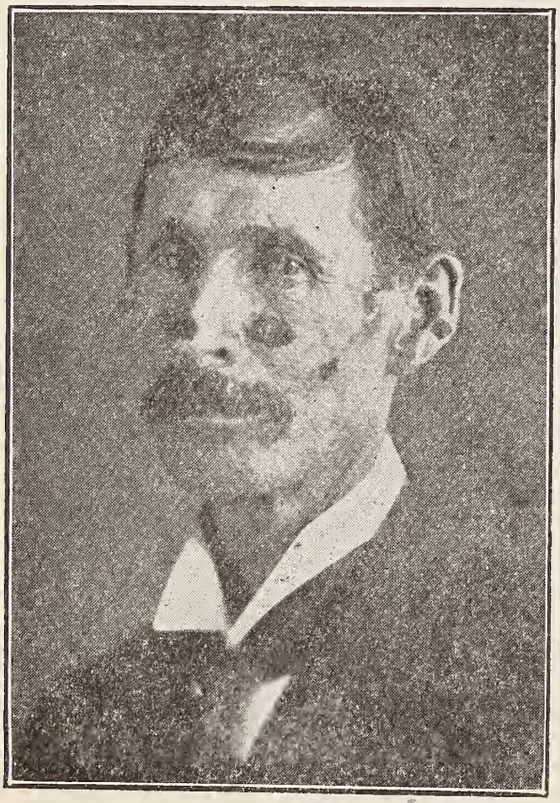
As sunlight is the most powerful of all bactericides, and since it has the power of deep penetration, it is simply a question of getting a sufficient concentration of light to a sufficient depth into the tissues and the bacteria will be destroyed.

We have used at Boulder Lodge during the past year the following method which has proven most effective in a considerable number of cases of which those cited are typical of their class:

The sunlight is first gathered up and concentrated by the large reflector ten feet in diameter, and is passed through the blue glass

screen as shown in Cut No. 1. The result is a strongly condensed blue light which has a low degree of temperature but a high degree of chemic power. This blue light is now again condensed and is passed through a diaphragm of opalescent glass in the manner shown in Cut No. 2. This reconcentrated blue light rapidly devitalizes the integument and the bacteria, turning the skin to a dead white color, the mass soon drying to a leathery brown crust, under which cicatrization rapidly proceeds.





Case 1. Wm. P. Farmer, Minburn, Iowa: Patient is suffering from numerous patches of lupus vulgaris scattered all over his face. The disease dates back for a period of six years, during which time it has steadily progressed. It has obstinately resisted all ordinary methods of treatment.

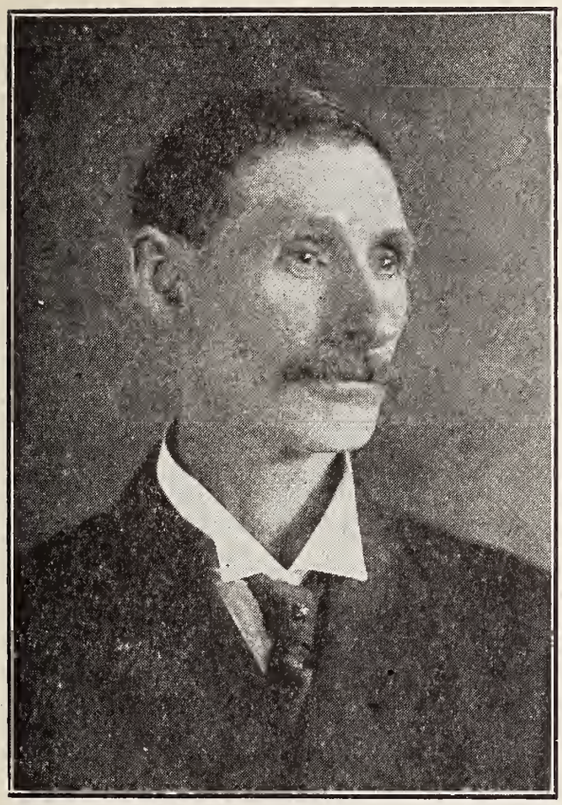
Upon examination, August 12, 1913, the patches were found to vary in degree from a considerable roughness and discoloration of the skin to ulcers extending deeply into and in places entirely through the skin.

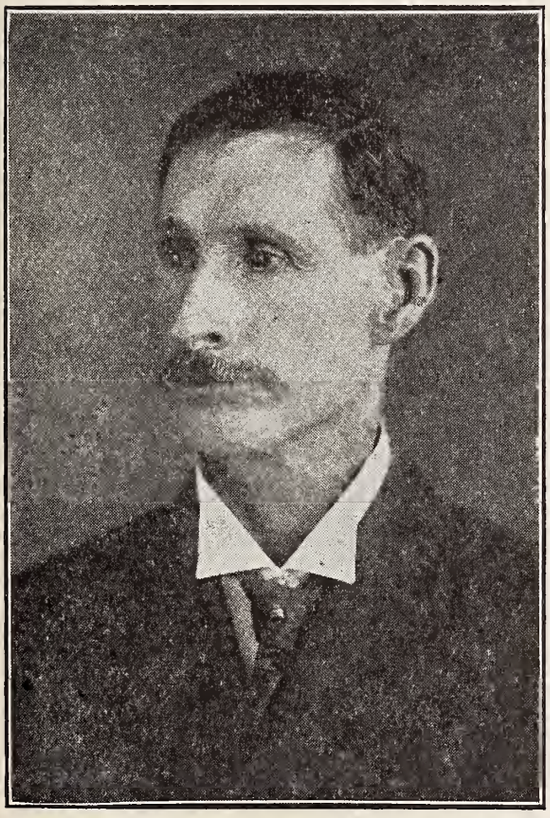
The accompanying photographs show the extent of the lesions and the results obtained by treatment.

The sunlight was applied to each of the patches for two or three minutes, until the tissues had become blanched and bloodless.

Upon patient's return six weeks later most of the patches were completely healed while the remainder showed incomplete cicitrization, only three or four places requiring a second application of the light.

On Nov. 20, 1913, there was complete healing of all the patches except a single point the size of a pin's head on the left side of the nose. This was the only point requiring a third ap-





plication of the light. No medicines of any kind were used at any time in the treatment of the case.

Patient was dismissed with instructions to return only in case of an apparent lighting up of the disease.

On Christmas day he reported the face entirely smooth and well.

Case 2. L. S. College student. Thick, leathery, black mole, raised one fourth inch above the surface of cheek. First treatment May 25, 1913. On July 6th dried crust fell off leaving two thirds of surface red and smooth. To the remaining portion the light was again applied. On Dec. 20, 1913 the face is smooth and only a trace of reddish discoloration remains.

Case 3. C. L. College student. Four small patches of lupus vulgaris over right eye. Has shown tendency to heal and reappear for the past five years. In healing leaves points of disfigurement on forehead.

A single treatment applied Feb. 23, 1913 was sufficient to effect a cure. There has been no reappearance Dec. 20, 1913.

The results obtained with this heretofore unused form of light appears to have all the therapeutic qualities of the methods used by Finsen, with the added very material advantage that large areas may be treated at a single sitting, and that from one to three treatments are sufficient in cases which had shown great resistance to the ordinary methods of treatment.

Compared with x-ray the sunlight is very much more rapid in its effects and is wholly free from such ill effects as the x-ray burn.

TREATMENT OF PUERPERAL SEPSIS*

HERBERT MARION STOWE, M. D., Chicago, Illinois.

Although we have made rapid strides in our knowledge of the pathology and treatment of puerperal sepsis since the days of the immortal Semmelweis, the large number of deaths occurring in all parts of the world must convince anyone that the successful treatment of this dread disease is reserved for the future rather than the present day. The peculiar liability of the parturient woman to the successful invasion of virulent micro-organisms, the extensive areas of open wound tissues and the abundant supply of lymphatic and circulatory elements surrounding the organs of parturition leave us to wonder not why so many women die from puerperal fever but why more do not perish as a result of this microbic invasion. This statement of fact leads us to believe that nature is able not only in many cases to resist the invasion of the streptococcus if not hampered by artificial means of local therapy but the patient often recovers in spite of the baneful and harmful efforts of those who hold a false conception of the bacteriological and pathological picture of the disease.

The severity of puerperal sepsis varies from the mildest form of the puerperal ulcer to the fatal forms of septicemia and hence it is of the greatest importance to determine in a given patient whether the case is one that will recover spontaneously or one that will call far the best and most scientific methods in vogue at the present day. If the maternal resistance is high and the virulence of the organism is low, it is folly for anyone to interfere with the progress of the case.

The pathology of puerperal sepsis easily divides itself into two great classes: the local forms that tend to spontaneous recovery and the general type that leads to a fatal issue; from the puerperal ulcer in the lower birth canal to sepsis acutissima where the patient dies before any pathology has had time to develop.

From a rather large experience in childbed fever during the past twelve years and from many studies and investigations of the disease during that time, I am able to make the following statements:

1. The great majority of the local forms of sepsis from the puerperal ulcer to and including parametritis and phlegmasia alba dolens terminate in recovery if the natural powers are not interfered with and the patient is treated by watchful expectancy.

2. The majority of the general forms, including septicemia, peritonitis, pyemia and ulcerative endocarditis will terminate in death despite any and all treatment.

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*Read before the Iowa and Illinois Central District Medical Society, Davenport.

3. The attempt to treat the local forms of sepsis by the curette, intrauterine douching or abdominal section is most dangerous to the patient and fills many graves with women who would otherwise be restored to their families.

4. The present high mortality of puerperal sepsis can be greatly reduced by a timely recognition of the type of disease under observation and, if local in form and the resistance of the mother is good, by refraining from local or operative interference.

5. Infection during delivery or in abortion is usually brought to the patient by internal examinations, unclean instrumentation, inefficient preparation or non-sterile dressings. Auto-infection is generally mild in character because from its relatively long residence in the body a certain degree of immunity has been established.

Ahlfeld has distinguished three forms of auto-infection: (a) from bacteria resident in the genital tract; (b) sepsis transported via the blood from a distant focus as the tonsil, lung or breast and (c) from surrounding tissues in the abdomen or pelvis as the appendix, tubes or ovaries. Strictly speaking, auto-infection should be limited to those cases where the bacteria of the genital tract develop and produce toxins without any external agency and these cases are relatively rare. Many supposed cases of auto-infection are due, as Zangemeister has pointed out, to streptococci which he found on various articles of furniture in the lying-in room as chairs, curtains, flies; as well as in the nose, mouth, hands, rectum, vulva and other portions of the patient's body.

In order to obtain a more definite view of the bacteriology of puerperal sepsis, the following facts are adduced and these statements are not only admitted by a majority of authors but are borne out in the laboratory and in clinical practice:

1. The streptococcus pyogenes is the most fatal organism in puerperal fever.

2. Its virulence is not stable but varies greatly according to the environment, the tissues in which it resides, the maternal resistance and its admixure with other organisms. Chemical, thermal and mechanical irritation increases the rapidity of growth and heightens its toxin producing power.

3. The virulence of the streptococcus is markedly increased when it migrates into contiguous healthy tissues. It is nearly always fatal when found in the blood. In one autopsy made recently it was found in the broad ligament four inches away from the uterus, completely outstripping any accompanying pathology.

4. If the streptococcus is confined to one situs, it soon dies in and from its own excretions. In order to thrive it must get away from its toxins.

5. The streptococcus cannot live long in dead tissues. It is an aerobic organism and needs oxygen for its existence. As its natural

tendency is migration into surrounding tissues pregnant with oxygen, to localize it is to destroy it.

6. The implantation of the streptococcus of high virulence in a wound of the perineum after labor may reach the general circulation a few hours before any symptoms have had time to develop.

7. The streptococcus has been found four inches away from the uterus in a fatal case of sepsis six hours after the initial symptoms developed.

8. A streptococcic colony implanted on the placental site will burrow so deep before symptoms develop that any douching, curetting or local manipulation of the uterus will fail to reach it.

9. It is impossible to sterilize an infected uterine cavity by any known chemical, thermal or mechanical process. The removal of many billions of streptococci by the douche or curette will improve conditions for a time but in a few hours, the growth is as luxuriant as before and the virulence of the organisms is greatly increased and their power to migrate markedly enhanced.

10. To promote the virulence and to produce migratory powers of the streptococci, it is only necessary to prepare freshly raw tissues in close association with the lymph and blood streams as a media upon which to develop.

11. The streptococcus is unable to penetrate a wall of leucocytes and when it is surrounded completely by this exudate formation, its power for evil is overcome. If its virulence is so great that it breaks down the wall by suppuration, the burrowing pus is protected from the general system by newly formed exudate walls until it finds an exit in the bladder, vagina, intestine or skin and recovery takes place.

One can always learn much by studying the natural means of cure in any disease and this lesson is of the greatest value in puerperal sepsis as it gives us the clue to the proper treatment and explains why many methods of treatment in use today are ill advised. Several years ago, Bumm of Berlin pointed out this pathologic picture and gave to the world the great benefits to be derived by allowing nature to treat the case when the infection is local. He has described in a classic manner "leucocytic wall" that is thrown around the focus of infection and anyone who has studied the findings in the postmortem room cannot but agree with his descriptions. From the simple puerperal ulcer through the cervical tear, sapremia, endometritis, metritis dessicans, parametritis, salpingitis, ovaritis to phlegmasia alba dolens, this Bumm wall is ever present in greater or lesser degree, all depending upon the virulence of the organism and the life of the patient depends upon the integrity and completeness of this exudate formation and he who would deprive her of this safeguard exposes her to the risks of a general infection and consequent death. The greater the virulence, provided the patient lives several days and possesses normal resistence, the great-

er the exudate formation and vice versa. If a colony of streptococci in the uterine wall is well walled off, the germs are confined in one small area and they soon lose their virulence and die. This is nature's method of cure and I have personally observed this process occur in hundreds of cases.

In the general infections, the streptococcus moves so rapidly that exudation is impossible or futile. The toxins generated by the organisms are so virulent that they easily overcome the maternal resistence and the patient dies within a few hours or days.

The prognosis in sepsis depends upon several factors: the general state of health of the mother before delivery, her vital resistance and her ability to withstand the shock and depression of the infection; the condition of the heart, lungs, kidneys; the virulence of the invading organism; the presence of tears or rupture of the uterus or lower genital tract; loss of blood during delivery: toxemia; her social status, as regards her financial ability to afford competent nursing, food, hospital care; the technic followed in the conduct of labor as regards internal examination and finally the method of treatment followed since the development of septic symptoms. Among the special symptoms which indicate a favorable prognosis may be mentioned a slow pulse, moderate fever, ability to eat and sleep, absence of vomiting, involuntaries or bedsores, the development of exudate masses in the pelvis and the general aspect of the patient.

A valuable prognostic test is to remove a small quantity of the patient's blood, centrifuge it to obtain a clear serum. This serum is placed under the microscope and in it are placed a few leucocytes and a number of the streptococci which are taken from the mother. This media is kept warm and in a dark place. The specimen is examined from time to time when if the leucocytes are digesting the cocci, the prognosis is favorable; if not, grave. I have used this test in several cases with very satisfactory results.

It is very unfortunate that physicians hold so different and radical views on the treatment of puerperal sepsis at the present time but it is gratifying to note that the tendency to interfere locally is waning and that the operative furor is slowly changing to an attitude of watchful expectancy. Among the authorities advocating the expectant line of treatment are Winter of Koenigsberg, Mermann, Saft and Baumm of Breslau, Crede of Leipsiz, just before his death and De Lee, Watkins and Emil Ries of Chicago. Bumm, Williams and many French authors advise a palpation of the uterine contents and their immediate removal but they all emphasize the danger of such a procedure when the streptococcus is present and in such a case leave the patient entirely alone. That it is possible to conduct a case of labor even under the most unhygienic surroundings with a minimum frequency of sepsis is proved by the work of the Chicago Lying-in Hospital where we have cared for over 20,000

labors with only nine deaths from sepsis and in four of these cases sepsis was due to intercourse shortly before labor began.

My own practice in a given case of puerperal sepsis is as follows: If possible, the patient is taken to a hospital or, at all events, she is placed under the care of a competent nurse. Plenty of fresh air and a sunny room are necessary. The bowels are emptied by calomel or castor oil. The diet is semisolid with plenty of water. Fifteen drops of ergot and hydrastis are given every four hours. An ice bag is placed on the abdomen. In order to promote drainage, the patient is placed in Fowler's position by raising the head of the bed. If the perineum or cervix has been sutured, the stitches are removed and the parts painted with iodine. A smear of the lochia is examined and a culture started at once to be examined 24 hours later. The blood is examined for leucocytes, red cells, hemoglobin and streptococci or other bacteria. The only indication for local therapy is uterine hemorrhage for bleeding rapidly reduces the patient's strength. Hemorrhage is treated by packing the uterus with a strip of two per cent iodoform gauze. The packing may be repeated several times until the bleeding stops. When removed a certain quantity of debris and blood clots are removed at the same time. In cases of septic abortion and fever after labor at full term, I have frequently left debris in the uterus for days without harm to the patient and without serious signs of sepsis taking place. A profuse and foul lochia is not an indication to go into the uterus in the presence of a streptococcic infection. Sapremia does not kill the patient. The saprophytes live only in dead tissues. They cannot live in living cells and hence they cannot extend into the uterine walls. When the uterus finally empties itself of its contents, they perish. During this time, an internal examination, douche or curettage may open fresh sinuses that allow the streptococci present to enter the living tissues and aggravate the condition. My internes at the Cook County Hospital never examined these women until the fever, pulse and pain were gone. Many desperately sick looking women upon entrance would clear up in a few days under this method of watchful expectancy. Puerperal sepsis is an acute self limited disease. During the height of the infective process, little or nothing should be done. After the crisis has been passed almost any operative procedure may be done with impunity. In a surgical case, we never operate in shock if possible; the smallest operation may prove fatal. When the patient has recovered, one may proceed according to the indications. So with puerperal sepsis. Let the patient recover from the shock of her acute infection and the mortality rates will fall. The two cases are analogous.

I wish to make a plea against the use of intra-uterine douches in sepsis. I have frequent occasion to observe their pernicious action. As before stated, it is impossible to sterilize the uterine cavity by douching. The main objections to this treatment are as follows: (a)

it cannot reach the bacteria already deep in the tissues that are producing the toxemia; (b) it is painful, often starting up violent uterine colics; (c) the water may be forced through the tubes and cause peritonitis; (d) the nervous shock may cause syncope, convulsions and coma; the antiseptic employed may be directly poisonous. Over 50 cases of poisoning by bichloride and carbolic acid are on record; (f) air embolism; (g) perforation of the uterus; (h) profuse hemorrhage; (i) chills and fever; (j) sudden death from air embolism or heart shock and (k) finally the infective material in the lower birth canal may be carried up higher to parts relatively sterile.

Finger curettage or digital removal of the uterine contents is recommended highly by a number of authorities. In the absence of hemolytic streptococci, this treatment decreases the amount and odor of the lochial flow. After the crisis of the disease has passed, I resort to finger curettage frequently, in connection with the Hoening abdomino-vaginal compression method especially in the treatment of abortion.

The use of the curette in the acute stage of sepsis is to be deplored. Even today some clinicians are advocating its use as a routine practice. Some years ago, I reported 750 cases of abortion treated by The Chicago Lying-in Hospital with no maternal mortality. I reviewed the literature in detail and found that the authorities are are almost unanimous in the opinion that this instrument should not be used. As Watkins and R. W. Holmes together with others have shown, it is physically impossible to remove all the decidua with the curette. One skims over the surface at one point and digs down into the musculature at another. We merely harrow the ground and sow the seed for further extension. In reporting 50 fatal cases of puerperal sepsis occurring at the Cook County Hospital within a few months, I found that in 22 instances, a fatal peritonitis followed immediately after this simple operation. Many other cases that entered under own service, just as seriously sick as the others, went on to recovery. I need mention only a few able authorities picked from a large number who have warred against the curette in these cases for many years: William, Noble, Edgar, Watkins, Ries, DeLee and Cragin of America and Bumm, Fehling, Kronig, Veit, Leopold, Olshausen and Shauta of the German States. The weight of authority and of clinical practice is against it. If we must curette, let us wait until the fever and pain have subsided and then the danger will be decreased.

In the general treatment of sepsis, every thing that will improve the patient's general health or increase her resistence should be done. These patients should receive a maximum of sleep and morphine is the best agent for relieving and procuring rest. These women will not sleep if they are stimulated to any extent; therefore, we omit strychnin and alcohol if necessary. Nursing is stopped

at once as lactation drains the patient's strength, disturbs her well being and may infect the child. For fever, sponging or cool packs are best. Antipyretics should not be used. Alcohol in small doses is of benefit but large doses are injurious. Vomiting may be relieved by gastric lavage but the vomiting from peritonitis is past relief. Iced champagne is better borne by the stomach in these cases. Meteorism is best treated by enemas, the rectal tube and milk and molasses, one pint each as an enema.

There is as yet no specific treatment of puerperal sepsis. It is impossible to kill the bacteria already in the system by direct antiseptic action. Collargol is ineffective. Mercury is without effect. I have used the bichloride in 32 cases without appreciable result.

The free use of normal salt solution is commonly used. It acts by stimulating the heart, kidneys, skin and intestines, relieves thirst and fatigue and increases the resistance of the patient.

As regards serum therapy, the consensus of opinion is against the treatment. If used at all, it should be given early and in a large dose (80 to 120 cc). If no benefit results, it has no value. Given in the later stages, it becomes directly injurious. It is useless in peritonitis, pyemia, cellulitis and thrombo-phlebitis.

The use of vaccines in the acute stage is useless. If the course of the disease is more chronic, as in pyemia, and it is possible to isolate the organism, an autogenous vaccine may be employed.

The absces de fixation, was first recommended by Fochier in 1892. It has been used by few authorities since that time and has deservedly fallen into disrepute.

The surgical treatment consists in early hysterectomy, ligation of the involved pelvic veins, opening abscesses as they appear in pyemia. The great difficulty of determining the proper time to remove the uterus—when the infection is confined to the uterine body itself—is the great drawback against this operation. Either the patient would recover without a removal of her uterus or the operation would be done when the infection was already extra-uterine and the procedure would only hasten the patient's death. Ligation of the pelvic veins is an operation still sub judice. The difficulty of choosing the proper cases and the difficulty of the technic operate against its popularity.

The abdominal method of attack in cases of parametritic exudation and perimetritis is chosen by those who are not aware of the real pathology of the disease. To destroy the Bumm wall of leucocytes, to remove the exudate present or to drain any pockets of pus at this stage is without sound reasoning. Surely, the field of operation is not sterile and the streptococci are implanted at once upon the delicate peritoneum and a fatal peritonitis is very apt to ensue. If pockets of pus appear in parametritic exudates in the upper portion of the broad ligaments or in the tubes or ovaries, one should wait until they burrow nearer an accessible part of the

body where they can be opened with safety without disturbing the general peritoneum. Only recently, a gentleman from the University of Pennsylvania advocated the abdominal removal of these so-called cornual suppurative exudates and states that during the past ten years, 165 of such cases have been attacked by the abdomnial route with a mortality of 9.6 per cent. He is not clear in his description how he was able to diagnose the cornual from the ordinary parametritic masses and leaves one to suppose that a number of these instances must have been the usual exudate found in parametritis which get well if left alone. From my own experience of several hundred cases of parametritis with exudate formation, I have rigidly refrained from attacking the mass unless it was accessible from below and then after the crisis had been passed. If the patient is kept in bed with absolute rest and given the treatment outlined above, there will be little occasion to operate through the abdomen. Such teaching should not be allowed to go out to the profession unchallenged for by its application in isolated or collected cases, many women will be lost. True advance in the treatment of puerperal sepsis must ever be parallel with our knowledge of the pathology and bacteriology of the disease and any views that differ radically and fundamentally therewith spread disaster wherever they may be accepted and tried out.

THE PRACTICE OF THE PRINCIPLES OF MEDICAL ETHICS*

J. H. SCHRUP, M. D., Dubuque.

Every county society, as such organization is now generally understood, has been a component of the American Medical Association, since the latter's reorganization a decade ago. Virtually, the one is but a branch of the other because delegates sent to state societies from county societies select the delegates to the American Medical Association. Hence its laws ought to be superior to any county society laws just as federal are to state and to county laws. If the county society by-laws clash with the A. M. A. by-laws the former should then of necessity become inoperative.

The principles of medical ethics are not generally understood and it has been my wish in this article to call attention to their broad lines of construction and fundamental worth. I shall consider myself amply repaid if my arguments will help in the awakening of scientific consciences to a distinction between the fundamental principles of right and wrong, and so displace the usual quibbling over irrelevant technicalities. The pessimism rampant in regard to the future "Ethical Practice of Medicine" as voiced by those

*Read before the Dubuque County Medical Society.

who ought to know better, at times is almost sufficient to dim one's own optimism.

For these reasons it seems to me that it is not amiss nor untimely to give a review of the history and crystallization of our present code of honor among gentlemen of the medical profession, together with a discussion of its philosophy, and a brief resumé of contents; hoping thereby to stimulate a desire for detailed information along these lines.

From the time of Hippocrates (400 B. C.) and of Charaka (100 A. D.) to the present date the practice of medicine has been governed by some code of ethics, implied or stated.

A code of ethics is a code of honorable conduct, and every profession is governed more or less by such a code, changing from time to time to meet new conditions. A code of ethics in our profession prescribes our duties to one another and to our patients. There can be no two standards of right and wrong, hence with varying opinions about a given course to be pursued it became necessary and desirable to have some prescribed rules of conduct for practitioners. It has come about in every activity of life, that experiences and precedents establish custom; and as custom generally crystallizes into an unwritten law, its infraction gives cause for censure or a more severe penalty.

The first modern, written code of medical ethics was formulated by Dr. Thomas Perceval of England in 1807. This same code of ethics with a very few changes and additions was adopted by the American Medical Association in 1847, and from this time until 1903 it was binding on its members. In 1903 the "Code of Medical Ethics" was changed to "The Principles of Medical Ethics," the change in name denoting a change from a law to mere suggestions for a proper course of conduct. In June 1912 these principles were revised and additions made in accordance with the progress of the times, the notable new additions dealing with contract practice and the condemnation of secret division of fees.

It is hardly necessary to state that a code of ethics is as binding on the members of the medical profession as the church precepts are binding on the clergy; or as the precedents in law are binding on the members of the legal profession; or as the Ten Commandments are binding upon all.

Rules, written or unwritten, must guide every course of conduct, whether of work or pleasure, and they must be justly and rigorously enforced lest they do harm to the transgressor by encouraging further transgressions, and injure society because of non-suppression of such transgressions against it.

What is the use of having laws if they do not stand for anything, except to look well on paper and serve as something to talk about? What's the use of having a constitution and by-laws and code of ethics governing a medical society if many of those who are

supposed to live in consonance with them, violate them whenever it is to their advantage and observe them only when to someone else's disadvantage? If it's fair for these few secretly or openly to violate the laws, why is it not fair for everyone in the society to do likewise and live in a condition of anarchy?

There is no wisdom in drawing loosely lines between right and wrong, or by tempering justice with misdirected mercy, weaken laws and bring them into contempt. Laxness of discipline must very soon lead to chaos and disorganization of the society and work to the advantage of the unscrupulous and those who need to depend upon their wits to make up for lack of science; this looseness and laxness, allowed to go on must result in "the survival of the unfit".

A government or a society commands respect only in proportion to the extent that it upholds the principles for which it stands. Any member who violates even one of its principles, just to that extent tests the sincerity of that principle and since the principles of a society or association are as enforceable as are the civil laws of a municipality, state or nation, such a test puts a society on trial for its own sincerity and its life.

There is no more excuse for disregarding the Principles of Ethics of the American Medical Association, (and as I say American Medical Association, because it is the only medical organization in this country that has a written code of ethics compiled and perfected to date) then there is for ignoring the old tried and true proverb of "Honesty is the best policy". For just as sure as the latter works out sooner or later, in one way or another, so too will disregard of the former brings on a train of woe. The individual whose experience has not demonstrated to him the truth of the foregoing will be immeasurably benefited by having such a penetrating searchlight turned on the subject that he may be convinced of its truth without going through the disagreeable experience of feeling its heavy hand.

On the question of punishment of any member who does not wish to carry out and live up to the ideals of a profession or society, there is little to be said. Suffice it to say that any individual who does not carry out and live up to the spirit of the Association's Principles of Ethics in word, thought and deed, is not a worthy member of any constituent society and according to the old adage of "He who is not with us is against us," it will clarify issues more speedily for such a member to take his proper place outside of the organization and so at least have the credit of fighting for principles in which he believes—even if they be as wrong as sin.

What is fair for one is fair for another and unless there are some definite rules to go by, there is no authority by which to determine who plays the game fairly or who plays with foul weapons. The principle that right will finally prevail and that honesty is the best policy has been accepted since time immemorial, and I repeat there is no escaping the retribution certain to overtake the evildoer.

The wise therefore resolve to do what is right at all times and this should be our economic policy.

The question then arises, what is right, and is the same thing right under all circumstances? Should circumstances govern laws or laws govern circumstances? To this there can be only one answer. What is right is right everywhere, in all circumstances. Provocation may palliate, it cannot excuse an offense. If we open one hole in the law, it will not be long before the law will be full of holes, and not much longer before there will be no law at all. If three strikes is out in a base ball game in the national league, it follows that if the game is going to be played the same way in this league, three strikes has to be out here too, whether the batter is a friend or a foe. He oughtn't to get four strikes and if he won't play the game that way, he ought to go back to the "Two-Old-Cat" league.

A pamphlet of the Principles of Medical Ethics has just been issued to every member of the American Medical Association and I would most earnestly recommend that every physician peruse it very carefully and govern his conduct accordingly. In fact, it is obligatory on him to do so if he would be a worthy member of the association and thereby of his medical society. This pamphlet deals with the following subjects in such a simple and precise way that there can be no mistake in their interpretation.

The pamphlet is divided into three chapters and a conclusion. The first chapter deals of "The Duties of Physicians to Their Patients"; the second of "The Duties of Physicians to Each Other" and to the Profession at Large"; the third chapter of "The Duties of the Profession to the Public"; and last but not least the CONCLUSION, which explains that the foregoing three chapters are mere outlines to be built up and filled in as required by local needs. Contract Practice and the Condemnation of Secret Division of Fees is given due place in the second chapter.

If anyone belonging to a local society has not received one of these pamphlets it is due to the fact that he has not a membership card. He can have one upon request, however, by writing to the association, 535 Dearborn Ave., Chicago.

In conclusion, I would say that mere lip service to the Principles of Medical Ethics of the American Medical Association is not sufficient, and cannot be considered as their practice, as we all know that "actions speak louder than words"—and no member can conceal this kind of hypocrisy for any great length of time.

Vascillation, lack of enthusiasm, and distrust of one another are some of the chief drawbacks to the practice and enforcement of medical ideals, and help to explain the lack of proper respect for the members of the medical profession by the public at large.

TRAUMATISM OF THE HIP IN CHILDREN AND ADOLESCENTS*

ARTHUR STEINDLER, M. D., Des Moines, Iowa.

Up to very recent years the traumatic influences to the hip joint to which the childhood is so exquisitely exposed has with one or two exceptions failed to attract the attention of the clinical observers. The fact that trauma is not being given due credit in the etiology of juvenile hip troubles is explained by the following points.

1. That fracture is the exception, not the rule, due to the anatomical condition of the infantile and adolescent femur.

2. That loss of function is not absolute, nor evident enough to give the impression of a serious injury.

3. That deformity with functional incapacity often does not occur until late when it is difficult to raise a point of traumatism in the history of the patient.

In other words it shall be pointed out that the common injuries to which the hip of the child is subjected, far from being negligible as they are often held to be, can and do produce anatomical changes in the femur which either in their immediate symptoms or oftener in their later consequences bring about considerable damage to the integrity and function of the joint. Only, they do not coincide with what we are wont to see in the adult as result of injury; with these latter conditions we are well acquainted and they offer little difficulty to the diagnosis.

The injuries to the juvenile hip especially those of moderate intensity, however, are entirely governed by the anatomical peculiarities of that age; and with these we have not been well acquainted up to recent investigations. In consequence thereof these conditions are often either not recognized until late complications in form of deformities arise and then the connection between trauma and resulting deformity is not realized; or else, the condition is misdiagnosed from the start, if symptoms are obvious and preponderant enough to suggest serious trouble in the hip.

What are we to expect from moderate injuries to the hip in juvenile and adolescent age in regard to anatomical lesions?

I. Fracture of the neck of the femur is by far the rarer occurrence in children and adolescents, while the separation of the epiphysis is almost the rule. Among 88 injuries to the upper end of the femur up to the 20th year Hoffa found 84 epiphyseal separations and only 4 fractures of the neck of the femur. To produce the later it takes a considerable force even in the juvenile age. According to Schwarz, who has carefully collected the cases in the literature these fractures are intertrochanteric. The femoral neck in the young shows two places of lesser resistance; the epiphyseal line in which

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separation occurs and the trochanteric region where in the cases on record the fractures are located. Schwarz on re-examining 6 cases of fracture 7 to 14 years after the injury reports one case with ideal union, in others coxa vara, fibrous union, pseudoarthrosis, deformation of the upper femoral end with coxa vara and arthritis deformans, finally progressive atrophy of the neck with secondary epiphyseal separation as late results of the injury. There is at the start comparatively little functional disturbance of the limb in these cases, a fact which renders the early diagnosis much more difficult.

The bulk of traumatic cases, then are those of separation of the epiphysis. Separation may be partial or complete. The partial separation is more likely to occur in adolescents. Separation necessitates rupture of the periosteum and of the cortical substance at the junction between head and neck and the separation of the epiphysis from the neck within the zone of epiphyseal cartilage. The displacement which follows as a rule forces the head downward so that the epiphyseal line instead of running from upward and outward to inward and downward assumes a more perpendicular direction. So under the stress of the upright position the head unites in coxa vara deformity. Since it is peculiar to the age of the patient and to the nature of the injury that the immediate functional disturbance is insignificant, the final coxa vara symptoms may be the first to attract attention.

It must be stated in this connection, however, that trauma is not the only determining factor, to cause the development of a coxa vara. Much has been contributed to the understanding of this condition by Peltesohn's investigations. According to his classification the following are the points of distinctions:

1. Cases of purely traumatic coxa vera without rickets; these are evidently rare, though single cases are reported by Joachimsthal and others.

2. The bulk of cases are the ones of traumatic coxa vara following separation of the epiphysis with pre-existing rhachitic softening of the upper end of the femur.

3. Cases of rhachitic softening of the bone with subsequent coxa vara deformity without trauma. Though in this group, too, some authors are inclined to consider slight infractions of the femoral neck from minor, every day traumatisms as the contributing causes.

In applying these etiological principles to the usual topographical classification of coxa vara we may distinguish:

1. Coxa vara trochanterica: fractures of the neck (rarely) or infractions are responsible for this type. The prognosis is less favorable.

2. Coxa vara cervicalis: typical for the rhachitic coxa vara of the adolescent.

3. Coxa vara capitalis. This is essentially the form resulting

from separation of the epiphysis from slight traumatism or otherwise. Drehmann and others have reported on cases of coxa valga following injuries. This condition, too, seems to cause little functional disturbances at the start and the original injury is often overlooked. Drehmann, David, Hofmeister and others who have described sporadic cases, ascribe the deformity to previous separation of the epiphysis after trauma forcing the proximal end up and outward, the condition being opposite to that in coxa vara or subcapital fracture. It cannot be denied that static influences also, are active in the development of coxa vara or valga deformities but they must be considered as contributory agents only in these cases, whereas the trauma is a direct causative agent.

Of further interest are findings of chronic arthritic changes in the hip following traumatism, since this is a complcation especially apt to cause diagnostic errors and since its clinical identity is little known. The osteo-arthritis deformans juvenilis of the hip sets in often without perceptible cause, but in a number of cases trauma is mentioned. Without fever and under moderate pain or ache a limp may develop as the first symptom to attract attention. Examination shows restriction of abduction while the other directions especially flexion is little changed. There is some prominence of the trochanter and Trendelenburg's symptom, i. e. insuffiency of the gluteal muscles manifest by dropping of the sound side of the pelvis when patient stands on the affected limb, is present. Occasionally there is a stage of spasticity, as in coxa vara, with more general restriction of motion, but rotation even then is free (differentiation from hip disease.)

In the x-ray we notice flatness of the head with bone atrophy in head and corresponding part of the acetabulum. This is a secondary arthritic condition analagous to the coxa vara adolescentium and generally recognized as late sequelae of traumatic separation of the epiphysis. In this respect it is to be held on the same scale with coxa vara capitalis traumatica as mentioned before. In all probability a large percentage of so-called osseous forms of tubercular hip which apparently heal with excellent mobility are not tuberculosis but cases of coxa vara capitalis.

In this connection Bibergeils observations must be mentioned regarding late complications in reduced congenital hip dislocation. He, and others, report cases of coxa vara following reduction after 5 to 8 years. Considerable atrophic changes are noticed in the femoral head of older children after difficult reduction. These cases are undoubtedly traumatic; in some there may be a condition of osteomalacia as Redard maintains; in some the changes may be those of traumatic osteoarthritis; in most of them, however, the primary lesions is that a traumatic separation of the epiphysis and its sequelae (Ludloff).

I have had occasion to observe three cases of traumatic separa-

tion of the epiphysis lately. They all involved children between 10 and 14. There was no loss of function at the start, little or no pain. The first real symptoms were those of coxa vara, beginning or already progressing according to the time elapsed since the injury.

As to the injuries preceding tubercular hip disease, though not an issue in this paper, I may state that in many cases diagnosed as tuberculosis where the hip has apparently healed with perfect motion there is a strong possibility of epiphyseal trauma and subsequent traumatic arthritis, especially since in not less than 25 per cent trauma is mentioned in the history.

It is unnecessary to point out that in case of doubt one may turn with greater safety to the diagnosis of the more serious condition. Fortunately either arthritis or epiphyseolysis or tuberculosis require early fixation and elimination of weight. But the salient point in this question is that separation of the epiphysis, due to the leniency and the unfamiliarity of the symptoms often may and does pass unrecognized until the development of subsequent deformities. And since the early and proper treatment of the injury, i. e. rest and fixation in abduction affords prompt relief, we are incurring the same responsibility in failing to recognize this condition as we would in neglecting a fracture of the neck of the femur in the adult. My advise would therefor be in general, to look more carefully for incidents of trauma in the history, to attribute more importance to these data if they do come up, and to x-ray the cases sooner, oftener and better then heretofore.

ARE THOROUGH EXAMINATIONS WORTH WHILE?

J. F. STUDEBAKER, M. D., Fort Dodge, Ia.

Some years ago an interne in one of the large eastern hospitals sent a patient from the receiving and examination rooms to a surgical ward with the diagnosis of compound fracture of the leg. The clothing had not been removed on account of the rush of patients. The suffering man was quite dazed from the free use of spirits and so could not give any definite history. Considering the dispatch with which the patient was handled the diagnosis was perhaps unique. The ward internes in their examination later removed the clothing and found the bones previously palpated by the receiving interne to be fragments of the wooden type. The overcrowded interne had not even taken time to secure from friends the history of injury.

We are told that the physician in the old days made his diagnosis, prognosis, and outline of treatment mainly according to his ideas formed after getting a few answers to the questions propounded to his patient. Diagnosis was the least important of all

and prognosis less so than treatment. The thing required from the doctor on his first visit was relief and on his second call the cause of distress. If his diagnosis was not definite in his own mind generalities were acceptable to all concerned for such terms as paralysis, debility and dropsy were considered quite specific in their meaning. Naturally the therapeutics were symptomatic.

The fault was not with the physician for he had not the advantages of modern training and the essential appliances for diagnostic acumen. It would not be easy to imagine the greatness of Hippocrates if he had in his time the means we have in forming an opinion, for he was original in his research work. He was the first to base what he considered facts upon investigation. Before him everything relative to medicine was a formless mass, a mixture of speculation, systems, science and philosophy, there being no reliable or classified records. Its expression was left for the methodic mind of Hippocrates. He did not have all the medical lore of all centuries in his office. He secured his information from a different source. He went to renowned courts and famous places to study, going either by ship or on foot. What a slow but fascinating process of intellectual growth, going leisurely from city to city, a month's journey apart, with a language changing at every villa. News was news for years. How different is it now! For the art of printing becoming known in the 15th century has made it possible for the compilations of the best thoughts of the best internists and surgeons to be ready reference in the thorough study of our patients. Later the microscope was invented and it began to solve problems hoary with age. Laboratories were established. The methods used in them to-day instill in the medical student the habit of painstaking research work. We are in an age of systematic preparation, exact observations, laboratory demonstrations instead of didactic lectures alone as formerly, and specialization.

With the advent of percussion, gross pathology in the living subject became more significant. The invention of the stethoscope meant the individualizing of thoracic diseases, the detecting of the finer points in differential diagnosis of heart and lung diseases.

And now in recent years an invaluable instrument, having its equal only in the clinical thermometer and the stethoscope, is added to our diagnostic and prognostic aids. Sometimes the reading of the sphygmomanometer is more important than the findings of a chemical examination of the urine, for we know that a persistent high blood pressure in 75 to 80 per cent of all cases of hypertension, as pointed out by Janeway, means kidney disease of a subacute or chronic character although albumen may be absent in the urine. Janeway also found that death, hypertension being present, was due most frequently to heart failure and uremia, less so to acute edema of the lungs and apoplexy, and least to such diseases as pneumonia, arteriosclerosis, etc. Therefore this mechanical device, uni-

versally required by life insurance companies in examinations of applications for medium or large policies, furnishes a great deal of definite information. Through it the average blood pressure in a normal man of average weight at the age of 21 has been ascertained to be 120 cubic millimeters of mercury and that 1-2 cubic millimeter gain for each year thereafter is not abnormal providing the total gain does not exceed 15. Therefore the blood pressure of a man at 50 found to be 135 is normal.

It is often the experience of the general practitioner that his patient is not willing to give time sufficient to use these various valuable instruments. He rushes into the office and tells his doctor a few symptoms which frequently have no meaning and expects a prescription that will bring relief promptly. A few years ago a physician was hurriedly consulted in his office. The patient told him that he was unable to eat and that he had general abdominal pain. The doctor concluded that the patient had indigestion and gave him a few tablets for this condition. The next day he was brought in from his country home to the hospital and the appendix was found to be ruptured. The patient recovered but the previous day would have been the safer time for surgical treatment. Thorough examinations are imperative in all cases not only for the protection of the patient but the physician himself. A thorough examination in some cases may be short and in others may be lengthy covering a period of weeks or months under varying conditions. It is better to give no opinion at all than to give a hasty and possibly wrong one. Recently a driver of a laundry wagon left his horse standing untied in the street and hurried into the office of a well qualified young practitioner and requested that he would fix up some pills for his liver, he was yellow, true enough, as reported. The patient rushed to the window and stated that he must get back to his horse at once for it was not tied. The doctor prescribed and received no later report from his patient until he had seen other physicians. His stomach symptoms were so prominent that he was treated for stomach pathology. All his consultants had no opportunity to make a thorough investigation until he had sought the help of an institution of well known doctors. These are said to have been puzzled for they had studied him diligently during the course of a week thinking that his trouble was due to pathology in the stomach of a malignant character. A routine examination was evidently resorted to including a blood examination. A pernicious anemia well advanced was discovered and the patient was sent home with a carefully guarded prognosis.

If the patient's or physician's time is limited, a later date should be mutually agreed upon when a thorough examination can be made. This is easily done when the patient understands that it is for his interest and intelligent treatment. It has been said that

errors have been made more on account of the lack of observation rather than on account of the lack of knowledge.

Thoroughness is demanded in the investigation of every case irrespective of sex, wealth or station of the patient. A complete record of a family and personal history, and of the physical and laboratory findings should be made in such form to be readily referred to later. The history should cover the patient's age, nationality, years of married life, the kind of occupation and the surroundings of same, the daily hygiene, the habits, the questions of the regularity of the physiological functions, all diseases and injuries from childhood up to date, and a brief reference to the subjective symptoms of the present illness. It certainly is a loss of time for a physician to listen to a long descriptive story of what seems important to so many patients. He should not arrive at an opinion at any time before the examination is thorough. The symptoms of the patient's present illness may be referable to an acute minor lesion secondary to a chronic process. From this we can see how necessary it is to get the patient's first symptom of illness, its character, location and duration, no matter if it occurred years ago.

About two months ago a boy 11 years old, came into my office to show me his discolored sun-burned legs for he thought he was poisoned in some manner in the shoe factory where he was working. You will see later that I failed to get any history of the boy's previous illness or trouble in his large joints. As I was busy at the time I gave him only small consideration, asked him to report the next day, and sent him away with a prescription for a local application. When the boy returned I was surprised to find on examining the pulse that he had hypertension. He had moderate fever. Auscultation of the heart sounds revealed a soft blowing murmur systolic in time. The diffuse discoloration of the lower limbs had become more extensive. This was hemorrhagic in character. Petechial spots on the upper extremities were distinct. The boy showed evidence of labored breathing. No joint symptoms were present. A diagnosis of endocarditis was made. The lad improved and felt well for a number of weeks. Ten days ago I was called again to see him. He had hot shining swollen joints—the knee, ankle and wrist—the infection having a migratory tendency. The pulse was 120 and of high tension. Fever 102 5-10. A marked systolic murmur had appeared again. Rest in bed and aspirin seemed to bring about more favorable conditions—pulse 72, temperature 98, and only slight murmur. The diagnosis now appears very simple and would have been made at an early date if the examination had been complete. The father stated that the boy has had pain in his large joints frequently before. I am convinced that when there is doubt every means should be exhausted—simple methods are usually sufficient but sometimes a general routine examination must be employed to make a successful diagnosis.

Following out this plan a compensatory diarrhea has been traced in the laboratory to the kidneys. An exhausting diarrhea has been found to have its source in the malignancy of the viscera. A troublesome secondary anemia may have some obscure cause as some focus of infection in the accessory sinuses of the nose.

Time is too limited to go into this subject minutely and so will conclude this paper by mentioning a few things occasionally overlooked in examinations, for example, the proper condition of patient at the time of examination. If fleshy people purging will assist in diagnosis of abdominal tumor which in some cases disappears after the free evacuation of the bowels. The knee jerks should be elicited as well as the eye findings for gastric crises have been taken for ulcer or appendicitis. In all abdominal examinations gentle "palpation produces the most important sign for successful diagnosis." Gentleness will greatly aid in securing the confidence of your patient. It is useless to undertake to overcome rigid abdominal muscles by firm pressure. If the abdomen is rigid and sensitive palpation may be done satisfactorily if the patient is in a tub of hot water or under an anesthetic. If patient is conscious it is better to find a sensitive point than to depend upon the judgment of the patient to locate it. On account of nervousness the bimanual rectal examination in girls is the most important in the study of pathology in the lower abdomen. And lastly all breasts should be examined as a prophylactic measure for growths have been unexpectedly discovered, and any tumor mass having the least suspicion of malignancy should be extirpated at once.

This paper was not written for the purpose of outlining methods of thorough examinations but urging ourselves to a more untiring use of the advantages common to every physician's office.

A STUDY OF THE PARATHYROID GLANDS

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It is only quite recently that the study of the internal secretions and the functions of the ductless glands has assumed any important rôle in the progress of medicine, but the researches made during the last decade or so have shown the wonderful influence these glands and secretions have over the metabolism, development and growth of the animal or man.

A quarter of a century ago very little was known, indeed, of the functions of the thyroids, parathyroids, thymus, spleen, suprarenals, pituitary bodies or the secretions of various organs, such as the ovaries, testicles and the intestinal glands.

You are all more or less familiar, now, with these subjects and I desire to interest you today with a study of the parathyroids. These little bodies, hidden behind the thyroid gland escaped detection by the anatomist until a comparatively recent date, and, when finally discovered, they were given no particular consideration. Finally some investigator noticed that a rabbit deprived of these little bodies died in tetany. Further investigation confirmed the correctness of this observation and it gradually dawned upon the surgeon and general practitioner. At first it was thought by some that the parathyroids were supernumerary thyroids and by others that they were thyroid rests and had no particular function or influence in the animal economy, but the anatomists, histologists and embryologists proved that these bodies possessed a structure different from that of any other tissue. The experimental investigator had shown their remarkable physiologic importance and demonstrated that they were independent vital organs. Then it remained for the clinician to apply these results at the bedside and in the operating room.

It was in 1880 that Ivor Sandström discovered the parathyroid glands. In 1863 Virchow discovered them but thought they were lymph nodes or detached portions of thyroid tissue. Numerous other anatomists had discovered them but until 1895 they were not recognized as independent organs. In the latter year Kohn showed that they were independent structures and functionally distinct from the thyroids. While it is interesting to follow up the evolution of these tiny bodies it would take too long and it will be sufficient to say that at present it is known that they are necessary to life and when removed the animal dies in tetany, or if their gradual destruction is brought about the animal may die from severe nutritional disturbances and apathy with no symptoms of tetany. It has been demonstrated that if only one of the glandules is left the animal will live, but may show transitory symptoms of tetany for a time which subside and the animal finally assumes a normal condition.

The number of glandules in man ranges from two to eight or more, but the normal is four. The average size of the parathyroid glands is six to seven millimeters long by three to four millimeters wide by one and a half to five millimeters thick. The average combined weight of the four glands is about five grains. The number of glands in animals varies somewhat but the average is four except in rodent in which animal the normal number is two.

While the exact mechanism by means of which the symptoms of tetany is brought about following the loss of the parathyroids is still not definitely settled, there are two hypotheses which seem to be plausible—First, the idea that a metabolic toxin, which under normal conditions is neutralized by the parathyroid secretions, gives rise to the symptoms. Second—that the symptoms are due to a diminution of calcium in the tissues, which has been shown to follow parathyroid removal, the withdrawal of which leaves the nerve cells in a state of hyper-excitability which expresses itself in tetany. Please note this latter hypothesis, as I shall have something to say about it in the conclusion of this paper.

While it is questionable whether there is always a deficiency of calcium existing after parathyroidectomy, nevertheless the administration of a soluble calcium salt will promptly check the symptoms of tetany. That a poison is circulating in the blood after removal of the parathyroids seems to be proven by the fact that symptoms may be controlled for a time by bleeding and transfusing an animal with normal blood. That parathyroids are subject to the same diseases as other glandular structures has been demonstrated many times. Cystic and colloid degeneration, amyloid infiltration, hemorrhage, acute infection and suppuration, and even primary tuberculosis have been observed. There is also found hypoplasia and hyperplasis of the glandules.

About the time that Billroth and Kocher began doing goitre operations, it was noted that cachexia or tetany might follow thyroidectomy. Also it had been observed for many years that animals upon which complete thyroidectomy had been done, showed convulsive and tetanic symptoms and very quickly died, but no one had considered these symptoms, either in man or animal due to anything other than removal of the thyroid gland.

At this point Gley discovered in 1891 that the tetanic symptoms which appeared after removal of the thyroid were not due to the loss of the thyroids but to the loss of the parathyroid glands which were removed with the thyroids. It would be interesting to show how the importance of the parathyroids was worked out, but it is sufficient to say that it has been fully proven that the parathyroids are independent structures that are necessary to life and that the loss of them by removal or destructive disease produces a train of symptoms that are definite and constant. If the destruction of these glands is by a slow process, as by degenerative disease, the

individual shows cachexia, apathy and death through nutritional disturbances, but if the loss is brought about by sudden removal tetany supervenes and death follows in a short time. Thus was found the explanation of tetany following thyroidectomies and by this knowledge thyroidectomy has come to be a safe surgical procedure.

Erdheim says, (quoted from Ochsner and Thompson) "Between the small size of the parathyroid glands and the severe, often fatal results of their removal there is such a striking contrast that the function of these bodies strikes us as something marvelous and we are apt to maintain a skeptical attitude thereto."

It has been conclusively shown that the complete removal of the parathyroids produces certain symptoms,—already stated above,— that the administration of parathyroids or parathyroid extracts, or the implantation of parathyroid glands or the administration of a soluble calcium salt will control these symptoms. If the theory that the removal of these glands allows an accumulation of metabolic toxins in the blood, which it is the function of these glands to neutralize, and that these symptoms are also controlled by the administration of calcium, it seems reasonable to suppose that their secretion contains calcium or prevents its elimination from the tissues. As we find morbid conditions aside from the surgical operations about the parathyroids in which the symptoms of parathyropriva are present it would naturally lead us to think of the relation of the parathyroid glands to medical tetany, such as tetany following certain infectious diseases and that following gastric dilation with stagnation of the stomach contents—tetany of infancy and childhood—tetany associated with osteomalacia and rickets, and tetany occurring in the course of pregnancy and lactation.

Pineles (quoted from Ochsner and Thompson) was the first to call attention to the uniformity of symptoms in post-operative tetany in man and animals on the one side, and the different forms of idiopathic tetany on the other. This uniformity, according to Pineles, points towards a specific intoxication common alike to all thes various tetanic forms, and he brings forward as the causal factor in these conditions insufficiency of the parathyroid glands. It has been shown that idiopathic tetany is endemic in certain localities, and that in these localities goitre is rare and where goitre is endemic, tetany is rarely seen. Investigators have shown by autopsies that many times, though not always, the parathyroids are diseased in these idiopathic tetanies. It does not require the destruction of all the parathyroid bodies to apparently produce idiopathic tetany, but a diseased condition of one of them may do it as in a case reported where a facial tetany was cured by the removal of a tuberculous parathyroid during a thyroidectomy on account of goitre. In some cases of autopsy performed on subjects that died of acute dilation of the stomach the parathyroids were found to be

hypertrophied and congested, and seemed to be in a hyperactive state. In these cases it was considered possible that the enormously dilated stomach elaborated more toxic material than the parathyroids were normally called upon to neutralize, hence their enlargement and hyperactivity. It also suggested the possibility that had these patients received parathyroid substances or calcium to aid the over-active parathyroids the patients might have been tided over the acute stage and saved.

In children's tetany, autopsy in the majority of cases has shown hemorrhage into the glands or a hemorrhagic degeneration. In some cases there has been found other degenerative diseases of these glands and in a few the glands seem to have been normal, but these latter cases do not disprove the possibility of the tetany being caused by parathyroid disease for the number of parathyroid glands is not constant and in many cases they are difficult to find. Sometimes parathyroids are imbedded in the thyroid gland so that it is not improbable that diseased glands were overlooked. One of the most convincing studies, as regards the parathyroid origin of tetany in children, is that contributed by Yanasse. He examined the parathyroids in eight-nine children showing tetanoid conditions. He found hemorrhage in thirty-three children—37 per cent of the cases. He asserts that hemorrhage of the glands is acquired during birth, frequently accompanied by pleural and pericardial ecchymosis. Hemorrhage of these glands can be demonstrated with certainty only during the first year of life. After the fifth year one cannot say from histologic study that hemorrhage had ever occurred. Late hemorrhage in older children and adults seldom occurs. Yanasse concludes that there is doubtless a connection between parathyroid hemorrhage and tetany. His explanation of this connection is as follows:—"It has been proved, experimentally, that the parathyroids are poison destroying organs whose principal function is to neutralize metabolic poisons which are detrimental to the nervous system. Therefore we must recognize in metabolism the origin of the so-called tetany poisons in the nerves—the principal tissues attacked by it,—and the parathyroids, the organ that neutralized this poison. Hemorrhage does not completely destroy but only partly damages the glands. The poison increases because the parathyroids damaged by the hemorrhage, no longer exert their usual function. Only in this way can be explained how parathyroid hemorrhage early in post-fetal life leads, in many cases, to tetany later in the life of the afflicted individual.

It is well known that in the course of rickets and osteomalacia tetany may occur. It is has been noted by Erdheim that rats deprived of their parathyroids suffer from crumbling and fracture of the teeth. In these diseases there is some profound disturbances of calcium metabolism and it has been shown that an intimate relation exists between the parathyroid and calcium metabolism. Therefore

we might expect to find some abnormal condition of the parathyroids. This has been observed a sufficient number of times to at least suggest a relationship. The abnormal condition has most frequently been found to be a hypoplasia which could quite possibly be congenital.

The relation between puerperal eclampsia or tetany of pregnancy and lactation and disease or removal of the parathyroids has received such convincing proof through experimentation that it seems to be almost a settled question. Experiments were made on rats; many rats were partially parathyroidectomized, that is had one gland removed which usually some transient symptoms but recovered. Later as these rats become gravid they develop severe tetany or eclampsia during pregnancy or the puerperium and usually died. Vassale removed from a female dog three of the four parathyroids. Eighteen months later the dog gave birth to eight puppies. On the fifth day of lactation it was taken with severe convulsions which seemed to be relieved by taking away some of the puppies and feeding with thyroid extract. The convulsions were renewed, however, and combated anew with thyroid extract and was continued to the end of lactation and the dog recovered. Nothing was said in this report whether it was suspected that the thyroid extract contained also the parathyroid substance or not, but it probably did. Several similiar experiments have been made on cats. Lanz observed, without any thought of the parathyroids, that pregnant cats could not withstand as great a loss of thyroid as non-pregnant animals, but no doubt these animals were parathyroidectomized as well as thyroidectomized. Halsted found that a pregnant dog on which a thyroparathyroidectomy was done was taken near the end of pregnancy with tetany and died.

We know that the amount of metabolic toxins is greater in the blood of a pregnant woman than in the non-pregnant. We also often note enlargement of the thyroid gland during pregnancy and lactation, and it is reasonable to suppose that the parathyroids are also enlarged and more active. We can readily see that a woman whose parathyroids are deficient, either in number or from disease or hypoplasia, stands a much greater chance of suffering from eclampsia during pregnancy than one whose parathroids are normal and active. It is well known that the pathology of puerperal eclampsia is unsettled. Those of us who graduated twenty years ago or more were taught that disturbance of the function of the kidneys or a temporary nephritis was the cause of eclampsia, but those of us who had considerable obstetric practice soon found eclampsia frequently occurred in women whose kidneys were apparently normal. Then we got hold of some newer text book on obstetrics and learned that some fellow had found that the liver was at fault and announced that the kidneys and liver were both to blame, and more recently some of our best obstetricians have acknowledged that the pathology was

unknown but that eclampsia must in some way be due to faulty metabolism. The men of this belief are, no doubt, pretty nearly right, and it seems to me that in the parathyroids and their function we have found, at least, where to look for the pathology of this disease.

The recent work of MacCallum offers, another plausible theory for this form of tetany but it is along this same line of investigation. This author states that in the tetany of pregnancy and lactation the drain of calcium in the production of the fetus or in the secretion of milk may be so great as to cause tetany without lesion of the parathyroid glands. If, however, the functionating power of these glands is impaired just so much is the calcium content of the tissues diminished and tetany thus the more liable to express itself.

Nor is this all that the study of the parathyroids suggests to us. The fact that in epilepsy we have convulsions of a somewhat tetanic nature has lead a few to accept the theory that this disease might in some way have its origin in disordered conditions of the parathyroids and in a few instances some remarkable results have been observed in the treatment of this dread disease by administering to these patients parathyroid extracts, calcium salts, etc. In paralysis agitans, a disease in which the pathology is not known, it is interesting to note that some abnormality of the parathyroids, either in number or disease of the glandules, has been observed.

Many neurologists claim there is a close relationship between epilepsy and migrain. Both are periodical, come on in paroxysms, are ushered in by an aura and with the exception of a pure Jacksonian epilepsy the pathology is unknown, unless a few cases of migrain are due to eye strain. By some authors these diseases are said to be a "nerve storm" whose warning approach is ushered in by an aura, etc. Reasoning from the similarity of these diseases, I have treated a few cases of migrain, which, next to epilepsy, is the greatest opprobrium of the medical profession, upon this theory and so far the results have been very satifactory indeed.

Now a few words in conclusion in regard to treatment of all forms of medical or idiopathic tetany. I believe all of them are in some way due to faulty metabolism, that by faulty metabolism toxins are formed in the blood which is the cause, directly or indirectly, of all these diseases, that it is the function of these minute bodies called parathyroids to secrete a substance which neutralizes this poison, the result of faulty metabolism, that in some way when the function of these organs is destroyed or interfered with there is a deficient amount of calcium in the tissues and by reason of this deficiency the nerves or a certain group or groups of nerves are rendered hypersusceptible to the metabolic toxins, and in this way cause the symptoms of these various diseases such as tetany following thyroidectomy in which the parathyroids are accidentally removed or injured, or in case these bodies are diseased or traumatized such

symptoms as tetany or infancy and childhood or the tetany of certain tradesmen, as shoemakers and tailors, or the tetany of pregnancy and lactation and possibily the convulsions of childhood, which sometimes occur in the exanthemata or pneumonia or in rickets and osteomalacia and possibly in epilepsy and migrain.

In chronic tetanies the transplantation of the thyroid bodies might be done if possible, as theoretically, the administration of the parathyroids in some form, would neutralize these toxins. But practically the administration of calcium acts just as well and in some instances better, though the reason for this, I think, lies in the fact that the parathyroid substances may be inert. Theoretically parathyroid feeding would neutralize the poison and the calcium would relieve the hypersusceptibility of the nerves to the poison.

The price of the extracts renders them almost prohibitive now. In calcium lactate we have a calcium salt that is soluble, almost tasteless, nontoxic and cheap. This is the preparation I have used. As soon as any tetanic symptoms appear I would begin its administration in ten grain doses, four or more times daily, and in any case where I suspected tetany to arise, as in the headache and nervousness preceding eclampsia, I would begin giving it before the symptoms appear and continue its administration for several days or weeks if it seemed desirable.

In one of my migrain cases I gave calcium lactate two or three days, when the patient had no symptoms whatever, then at the first aura, which consisted of malaise and soreness in a certain spot in the forehead, which always preceeded an attack, I began giving the calcium. The first dose relieved like magic, and about four doses were given. When the second attack occurred the patient was where she could not get the medicine until the attack had fully developed and the attack lasted only one day. The third attack was a repetition of the first, except that she took only two doses and felt so much better that she forgot to take any more. She has been suffering from migrain for thirty years and such an experience has never occurred to her before. Now I do not know that this patient has defective parathyroids, nor do I know any way of finding out, but there is an interesting incident in her history. In 1905 she submitted to a serious surgical operation which was followed by an attack of acute dilatation of the stomach.

Another case is a woman pregnant seven months, who had suffered two weeks with almost constant headache, insomnia accompanied by moderate dropsical swelling of the feet and legs and a trace of albumen in the urine. Ten grain doses of calcium lactate four times daily completely relieved her of all her symptoms in three days.

I know that a few cases mean nothing as far as statistics are concerned, but no doubt each one of you have one or more migrain sufferers who, having failed to get relief, quickly hide themselves in

their rooms for a day or two every two to four weeks, and suffer out their attack of sick headaches. Try this theory out on them and report results.

I hope I have succeeeded in interesting you sufficiently that by actual experience many of you will be able to report results at our next meeting and prove or disprove these theories. A personal letter from anyone who has made any investigations along this line will be appreciated.

INFANT FEEDING

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In discussing this subject that is essentially so interesting to every general practitioner, it may perhaps be well to first review briefly the history of infant feeding. Very little mention will be made of the infant naturally fed as the artifically fed infant is the one which concerns us most at this time. It was observed long ago that artifically fed infants did much better if part of their food was fresh milk of some kind. Many attempts were made to make cows milk more like human milk in it's composition. Upon analysis both human milk and cow's milk were found to contain proteids, carbohydrates, fats, etc., varied in percentages and properties.

The proteids being more abundant in cow's milk than in human milk obviously led to it's dilution for infant feeding. At first water was used as a diluent but later it was found when cereal gruels were used the curds found in the stomach were softer and more easily digested. Still later the use of peptonized milk came into quite general use, partial peptonization causing only small and soft curds to form in the stomach, while complete peptonization prevented them entirely. At still later date when the action of bacteria upon milk become known sterilization seemed to be the thing to do. This was soon found to affect the milk in some way that lowered it's nutritive properties. Then pasturization was introduced. This method has much in it's favor but when we realize that this process only kills acid producing bacteria and leaves those that attack proteids free action and that milk treated in this way, if not kept below 50°F. the putrifactive bacteria will multiply very rapidly. Such milk, while it may not taste sour, may have had proteids attacked by putrifactive bacteria and we will have digestive disturbances in the infant taking it. It is pretty generally realized that it is better to have a clean milk with low bacterial count, which if properly kept will not require pasturization to kill bacteria.

This brings us up to the question; are we getting the best milk possible for the infants under our care? To the general practitioner in the smaller towns this question is not so important relatively, as to the physician in the larger cities.

We have been taught that an infant could not readily digest the proteids in cow's milk and in many infants this is true. Yet, Holt has shown that an infant can for a considerable length of time digest as high as 6 per cent proteids, providing there is a sufficient whey content in the mixture. If the whey content is too small a rise of temperature results with retention of chlorides with fever continuing as long as the whey content is low and disappears as soon as the whey is increased. Many pediatrists are now using whole milk mixtures are giving relatively high percentage of proteids. Quoting Holt, "After experimenting along this line it seems clear that one may use considerably higher percentages of proteids in milk formulas than 3.5 per cent. This is a point which may be of practical importance in conditions in which there is a marked tolerance for fats and carbo-hydrates. Such high proteids at 4.5 per cent should be used for a limited time and never given at all except with suitable proportions of whey.

It was held by Cerny that fat was the greatest factor in disturbing digestion, while more recently others tell us that sugar is the chief cause. Holt states that we are safe in emphasizing that in healthy infants, digestive disturbances are due to fat, while an infant with disordered digestion may be disturbed by any one of the elements. High percentages of fat lead to fat indigestion, fat constipation and if continued, malnutrition.

Quoting Grulee, "For many years past the so-called percentage method of infant feeding had been advocated in this country. Page upon page of mathematically exact formulae have been published to aid one in determining a food suitable for a given infant. Such formulae are not wholly unnecessary but absolutely harmful, as they lead the average physician to regard the scientific infant feeding as a field too vast for him to cover with the limited time at his disposal.

It is now recognized that no single milk formula can be substituted for human milk as each infant is a law unto itself. To feed infants of a given age on a given formula copied from a memorandum book will never enable a physician to become a successful infant feeder as the food must be adapted to the baby and not try to adapt the baby to the food.

One of the most important points in infant feeding is the length of the intervals between nursing. When we consider that cow's milk mixtures do not leave the stomach for at least three hours after ingestion and that the stomach need a rest after it's work, it seems plausible that a four hour interval between nursing should bring good results. The best hours for feeding are, 6 and 10 A. M. and 2 and 6 P. M. and midnight and any one systematically and persistantly trys this regular four hour feeding will not be easily persuaded to shorten the time. When the infant has reached the age of eight or nine months the midnight feeding may be changed to 10 P. M.

thus allowing the infant an uninterrupted sleep of eight hours. To many, the possibility of such a thing seems ridiculous but with a large majority of babies this can be accomplished in a relatively short period. No one should expect to take a child who has had a two or three hour feeding and place it on a four hour one with out some difficulty.

The older the infant the more difficult this will be but with firmness even a radical change can be made in the second or third month of life, within a week provided the milk mixture is suitable for the case. One cannot lay too much stress upon the advisability of so regulating the child's life and especially it's nourishment that it expects certain things at certain times. It systematizes the gastro-intestinal tract and has it's beneficial effects upon the nervous system.

The amount of food given is largely determined by the age of the infant. Slightly more than the supposed capacity of the stomach is given at each feeding. One might expect that this would frequently be accompanied by regurgitation but such is not the case when the long interval is observed as undoubtedly considerable of the fluid content of the stomach passes the pylorus in a few minutes which probably accounts for the fact that no distention or regurgitation results from so large a quantity.

The most important subject is the composition of the food. We must understand that each constituent is necessary for proper nutrition and not a single consituent which brings about good or bad results.

Allen has shown that in twenty four hours it requires the amount of protein contained in one ounce of milk to the pound weight of the child to maintain (theoretically) a nitrogen equilibrium and that in order for the infant to build up, at least one and one half ounces is required but as Holt and others have shown larger percentages of protein can be given for a long period without doing harm. Every infant requires a definite amount of this nutrient element, also this protein must be backed up with the proper proportions of carbo-hydrates and fat so that it may be used for proper growth and not drawn upon to supply the energy which should be supplied by the carbo-hydrates and fats. A food low in proteid long continued will cause anemia, feeble musculature, poor circulation and various functional disturbances.

A more difficult problem to solve is the amount of milk fat to be used. In nearly all cases fat cannot be permanently removed from the food without causing grave disorders. On the other hand such large quantities of fats as have been used in cream mixtures, so popular in this country have anything but beneficial effects upon the infant organism. If we are forced to choose between no fat and high fat our choice would always fall on the latter but happily there is no obstacle to a middle course. The energy producing units in

food are found in fats and carbo-hydrates and a decrease in fats in other words, must be supplied by carbo-hydrates.

The carbo-hydrates best suited for the infant is milksugar. There has been a general tendency to give this to excess. Of the three (milk, malt, and cane sugar) babies will consume larger amounts of malt sugar than of either of the others without nutritional disturbances. Certainly, the infant will receive enough milk-sugar, if this is confined in amount and given in the form of milk-sugar content of the amount of milk required to supply the protein and fat. The rest of the carbo-hydrates are best given in malt-sugar and starches such as barley, oatmeal, flour, etc. Young infants as early as the third month will digest considerable starch perfectly and later constitutes a very important ingredient of the diet. Some physicians object to using cereal gruels for normal infants especially during the early weeks on the grounds that the digestive tract is wholly incapable of digesting starch foods. Holt advises giving starch foods as early as the fourth month from time to time with good results. Koplik says some of his most successful cases of infant feeding were those of new born infants whose percentage mixture contained as a basis a thin barley gruel. We can now obtain standardized flours for making gruels so that we know exactly the percentages of carbo-hydrates we are using in our mixtures. Personally, I do not use cereal gruels under four months except in cases of fat constipation and then only for a limited time.

The addition of salts to the milk formulae; there is no scientific or practical reason for their use and may be dispensed with, without in any way lowering the food value of the milk mixture.

Another important factor in our feeding cases is the examination of the infant's stools. This is of much value and gives us a key to the digestive tract of the infant. Do not, as is frequently done, leave this to the mother or nurse.

It is wise in all cases of disturbed lactation whether in maternal or wet nursing, to make efforts to produce a milk suitable for an infant who is not thriving, before changing to any other method. Rotch gives us the following table:

To increase the total quantity—Increase the liquids in the mother's diet, especially milk and encourage her to believe she will be able to nurse her baby.

To decrease the total quantity—Decrease the liquid in the mother's diet.

To increase the total solids—Shorten nursing intervals, decrease liquids and exercise, and increase the proportion of solids in the mother's diet.

To decrease the total solids—Prolong nursing intervals, increase exercise and increase the liquid diet of the mother.

To increase the fat—Increase the meat diet.

To decrease fat—Decrease meat diet.

To increase proteids—Increase exercise to the point of fatigue for the individual.

As regards the best methods to pursue in feeding infants each physician must work out for himself. Many pediatrists are using the percentage method of feeding while others are using whole milk dilutions. Some of these men reckon the amount of calories only, others depend upon the percentage method in computation of the infant's needs while others use them in combination. My plan is to use a combination of the two methods that is when using a percentage mixture or whole milk mixture to reckon the calories given in twenty-four hours feeding, to be sure I am giving sufficient calories to obtain proper growth. But the most important of all is to reckon the amount of proteid the infant is getting, as I have said before, an infant needs a liberal and fairly definite amount of proteids to develope properly.

Before finishing my paper I would urge that you give the infants the benefit of breast milk, their natural food, when possible, partially at least. Do not put an infant on artificial food at once, without due consideration of the infant's best welfare.

Are we as physicians responsible for many infants being given food other than breast milk, when with a little tact and patience the infant might obtain it's sustenance at least partially from the mother's breast? Are we responsible for the enormous amount of patent or prepared foods being used in our midst?

I hardly think that it will be necessary for me to answer these questions but hope each man will think seriously of them.

THE INDICATIONS FOR PARACENTESIS OF THE DRUM MEMBRANE

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There will be no attempt made in this short paper to take up the classification, etiology and pathology of the acute middle ear conditions, demanding drainage by aid of an opening made through the drum membrane into the middle ear.

The symptoms of an acute middle ear inflammation demanding the attention of the medical attendants in regard to paracentesis of the drum membrane, are as follows: pain, diminished hearing, bulging of the drum, fever, headache and mastoid symptoms.

Continued pain in the ear, with the presence of an acute middle ear infection, as manifested by redness, bulging of the drum and diminished hearing, is one of the chief symptoms for which a person will seek relief. And this is best given by making an opening in the drum membrane, enlarging it if one is present or if the opening is located in the upper part of the drum, it will be best to make the opening in the lower part of the drum and give better drainage to the middle ear.

Pain in the ear may, however, be due to neuralgia, a decayed tooth, pressure from an aneurysm, or any new growth causing pressure. We must not overlook some of the simple things, like a foreign body, a feruncle and diffuse inflammation of the external canal. In all such cases we would not think of doing a paracentesis of the drum, unless there was also present positive evidence of the middle ear being acutely inflamed.

If the hearing for whispering is greatly diminished, say to one meter, in acute otitis media, with the history of good hearing previous to the present acute middle ear inflammation, and added to this the presence of continued pain in the ear, gives a positive indication for paracentesis of the drum membrane at once.

Bulging of the drum, which is reddened, showing evidence of acute inflammation, accompanied by continued pain in the ear and diminished hearing, demands prompt opening of the drum and drainage of the middle ear.

There are cases where the drum membrane is thin and atrophic as in chronic catarrh or previous perforations, and it may be greatly distended, even to the outer end of the external canal, but the color is grayish and not reddened as it is in acute cases, and paracentesis is of course contra-indicated.

The presence of fever, accompanied by the symptoms of acute otitis media demands immediate paracentesis of the drum, and especially is this true in children.

In cases of headache, accompanied by acute otitis media a free

and immediate paracentesis should be done in all cases, to give drainage to the middle ear, and relieve the pressure caused by the confined pus and gas.

In acute otitis media, with the symptoms of the mastoid process being involved, as manifested by pain over the mastoid process, both spontaneous and on pressure, there should be free drainage given to the middle ear by paracentesis of the drum at once. And in many cases the mastoid symptoms will subside, without going on to the formation of pus in the mastoid cells, and destruction of bone.

There are two other conditions of the middle ear, accompanied by fluid, both of which are milder and less severe than the suppurative form. They are: a. serous exudate; b. fibrino-serous exudate.

In the case of serous exudate where the middle ear is partly full of serum and there is little or no improvement after 10 to 14 days treatment by inflation with air, drainage by paracentesis and inflation is indicated.

Where the middle ear is practically full of serum, paracentesis is indicated at once, as these cases are very slow to improve it not drained.

Where there is fluid in the middle ear containing fibrin with its well known tendency to organize and form connective tissue, binding the different parts more or less together, the indication for drainage by paracentesis of the drum and inflation with air is absolutely clear.

If the middle ear is not promptly drained of this fibrinous material, organization will take place and result in diminished hearing, which is permanent.

In conclusion, I will say that if in doubt, follow general surgical principles, and drain, as it is far better to open the drum ten times where it is not indicated, than it is to overlook a single case where paracentesis of the drum is indicated.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

EDITORIAL

The Iowa Epileptic Hospital.

The last session of the Legislature provided for the purchase of land and the erection of buildings for the care of the epileptics of Iowa. The importance of this move has been fully recognized for some time and the profession must feel that Iowa is taking on an unusual long step in advance in making provision for the care and treatment of some of the most unfortunate members of the community. Every medical practitioner knows and every family that has been unfortunate enough to have an epileptic, realizes how serious a matter it is not to be able to provide institutional treatment for the unfortunate one. The treatment of epileptics up to this time has not been very satisfactory, and no very brilliant results have been accomplished. With the exception of the type known as the Jacksonian type, the cause of the disease is but little known, but this fact should not deter us from making further investigations, and one of the means of accomplishing this purpose is the establishment of institutions devoted to the study and cure of epileptics. The epileptic institution will come under the government of the State Board of Control, and we understand that Dr. M. N. Voldeng, Superintendent of the Insane Hospital at Cherokee, has been promoted to the very responsible position of superintending the general plan of construction and the organization of this new institution. The Doctor should feel highly complimented at this expression of confidence on the part of the Board that has for many years been in a position to measure the fitness of the man for the place. The working out of the business plan is not an easy one because there are so few really modern institutions of this kind to model after, so that in fact it would give the Doctor an opportunity of putting into form the best ideas that had been worked out in relation to the study and treatment of epilepsy. It is sincerely to be hoped that the Board of Control will not attempt to interfere in any way with this highly technical work of organization, and it is to be hoped that the Legislature will see the importance of furnishing the necessary funds for the building and organizing of this important institution. If anything can be done for epileptics, the cost in money should not be counted. We are frequently confronted by the unfortunate fact that legislators in the interest of economy, refuse to grant a sufficient amount of money to make the enterprise complete. We realize that it is not a matter of money alone, but it is a matter of securing the best thought to bring

about a certain definite result. Great things have been accomplished in very imperfect environment when the work was directed by competent brains. In the matter before us now we feel very sure that Dr. Voldeng with his long experience in institutional work can be trusted not to make unreasonable demands upon the state in the matter of building and equipment. It is to be hoped that those in authority will not feel that it is the duty alone of the state to provide suitable buildings for the shelter of the unfortunate victims of epilepsy, but also to provide means for the scientific study and treatment of this disease. The advantage of having a separate institution not connected in any way with insane hospitals lies in the fact that the entire energies of the staff can be centered on this one disease, which may make it possible to work out a solution of some of the mysteries and uncertainties that surround the disease.

The 1914 Meeting of the American Medical Association.

The work of the 1914 meeting was not materially different from the work of other years; that is to say that since reorganization the work has been good, improving little by little with each advancing year.

The House of Delegates appeared to have had a peaceful gathering. Very little occurred to disturb the ordinary routine. Two or three resolutions came up through the delegate from the Illinois State Society that had something to do with the organization of the American College of Surgeons. This seemed to be so foreign to the interests of the A. M. A. that it was not thought worth while to give the matter any consideration.

San Francisco was selected as the next place of meeting. Some of the delegates felt that meeting in an exposition town would divert some of the interests of doctors meeting, to the various attractions. This may be true to some extent, but previous meetings in exposition cities has shown that the influence of several attractions did not affect the real workers of the association, and that the meetings were generally well attended. It was not noticed that at the Portland meeting, that the association suffered from want of interest on the part of the Fellows and Delegates.

We have received a marked copy of "Science" containing the address of Prof. E. E. Lyon on the "Principles of Curriculum Making" as the presidential address at the 1914 meeting of the Association of American Medical Colleges. This appears to be a subject that almost every college man can write and talk about without any serious danger to their reputation. I have read the address rather carefully but I do not feel that I have been especially enlightened by what the author says.

At the meetings of the Council on Medical Education in Febru-

ary, the question of entrance requirements was discussed by President Lowell of Harvard and by Dean Vaughn of the University of Michigan from different points of view. The experience and skill and ability of these gentlemen, representing different sides of the same subject, shows that the ideal entrance requirements have not yet been reached and the suggestion may be offered that something depends on the character of the material to be worked over which may indeed be an important factor in determining just what kind of a foundation a young man may need, upon which to base a medical education. The real study of what a proper medical curriculum should be, is of such a recent date in this country that we must be prepared for quite a wide range of difference in views, entertained by individual educators. There can be no doubt that we are coming closer and closer together as we annually go over the ground at the meetings of the Council of Medical Education of the Association of American Medical Colleges.

The history of medicine is a long one, and the various causes that have lead to the transfer of centers of medical education from one country to another, are intricate and complicated, each country apparently working out the problem itself and formulating courses of medical instruction on foundations that seem to appeal most directly to the needs of the medical profession.

The passing of centers of medical education from Holland and Italy to England was based upon the teachings by observation as best illustrated by the work of John Hunter. The passing from England to France was the logical outcome of the development of physiologic anatomy in France, and finally to Germany because of the scientific spirit of the German institutions and the evolution of the pathological and physiological laboratory. Perhaps in our discussion of the best types of medical education we shall be able to evolve a plan which will include the best that England, France, and Germany have stood for, and at least bring the center of medical education to the United States.

We have clearly become dissatisfied with our own methods and we have not found that the methods of other countries are entirely satisfactory. With this before us we are in a position where by earnest and judicious effort we shall be able to place our own institutions on such efficient and practical basis that not only will it be unnecessary for American practitioners to go abroad to study, but will attract many seeking the best of modern medical education, to our own shores.

The American Journal of Obstetrics Reforms Its Advertising Pages.

The appearance in the advertising columns of some of our oldest and most respected journals of advertisements of questionable nature, has caused a feeling of depression and discouragment as to

the relation of medical journalism to advertising frauds. Refreshing news comes to us from time to time from journals and lay papers that are beginning to feel their responsibility to the public for cleanliness and decency.

The American Journal of Obstetrics and Diseases of Women and Children, states that it was decided about a year ago to conform to the standards of the Council of Pharmacy of the A. M. A. The journal further states that owing to the existence of current contracts, much of the objectionable advertising material could not be rejected at once. We should be lead to suppose that this was an expression of belated virtue on the part of the journal were it not for the statement that this charge in policy removes an objection sometimes urged by authors who contemplate a publication of articles in the journal. This confession conveys to our mind the idea that it was healthy pressure brought to bear by a number of our foremost writers who are thinking more of clean journalism than of the securing of profits to the publishers. However this may be, it is a healthy sign.

It has given us pleasure from time to time to announce that lay journals of the higher character, were doing this same thing of cutting out offensive advertising. We hope that the first movement in this direction will not come from lay journals, but from independent medical journals.

Three of the advertisers in this Journal have discontinued all advertising except the Journal of the A. M. A. and the twenty-two state Journals which keep their pages clean. This means that these advertisers are making a trial whether it pays to advertise only in clean Journals or whether the independent Journals are of better advertising value. These advertisers—The Radium Company of Pittsburg, the Uncle Sam Breakfast Food Company of Omaha and the Mead Johnson Company of Jersey City—appeal to you though our Journal and ask your consideration. These firms we can recommend to you and desire every reader to write them and give them an opportunity to interest you and demonstrate the value of their products.

As evidence of how some of the independent medical journals pad their advertising department and create an appearance of prosperity which perhaps is counted as an asset in securing other advertising, we desire to mention the fact that not a few so-called independent medical journals are carrying the advertising of the Physicians' Defense Company of Fort Wayne, when as a matter of fact that concern went out of business over six months ago and paid all of its obligations before doing so. The same independent medical journals are carrying no inconsiderable amount of advertising for which they will receive no pay of any kind whatever. We know,

from bitter experience in some instances and as a result of investigation in other instances, that certain firms that are very easy to secure as advertisers are notorious dead-beats, and no one can extract a dollar from them without having a derrick to do it with, and the medical editor is the last man on earth that would be able to secure compensation for services rendered. This padding of advertising pages is on a par with the padding of the circulation, for it is a well-known fact that a large proportion of the independent medical journals have about one-tenth the circulation that is claimed, and we wonder how long the really desirable advertisers are going to stand for such imposition.—Journal Indiana Medical Society.

The Uncle Sam Breakfast Food Company wants to send to each of our members a large package of its breakfast food. Fill out the coupon in the ad and by return mail you will receive a sample which will permit your careful examination. The presence of almost 18 per cent of fats, from flax seed, gives the food a distinct value in the treatment of constipation and it merits your attention and approval. Every physician realizes the futility and undesirability of the constant taking of laxatives and a reliable laxative food deserves careful consideration. Certainly here is something better than the tasteless bran which has had such a vogue. Use the coupon and give the company a chance to interest you.

The Journal carries advertising for two reasons; 1, that the readers may be informed how and where to supply their needs for consultants, drugs, supplies, hospitals, sanatoria, foods, etc. etc. 2, as a source of revenue to the Society. And it follows closely that if the readers do not patronize our advertisers we will lose the income. Read the advertising pages just as carefully as you do the rest of the Journal, write to advertisers and ask for the samples they offer, use the coupons and get into close touch with them, and in writing don't forget to tell the advertisers that you appreciate his patronage of the Journal.

Some of the large independent Journals have notified some of our advertisers that they (the advertisers) will be boycotted for patronizing the clean Journals. As we have said before, quite a good deal of our advertising is on trial and unless our readers demonstrate their interest in this part of the Journal, we will lose out.

V. Mueller and Company of Chicago has taken a half page to call your attention to reliable surgical instruments. Mr. Mueller is well known as a reliable manufacturer of firstclass instruments and you will make no mistake in dealing with him, and be sure to tell him you appreciate his patronage of your Journal.

Just now radium is in the ascendency in the treatment of various neuralgias and new growths. The Radium Chemical Company is ready and willing to advise or help you in any way within their power and you should consult with them. It will pay you.

Mead's Dextri Maltose is a distinct advance in the modification of milk for babies and if you are caring for bottle-fed babies, you will find it very greatly to your advantage to be familiar with this product.

The Alumni Clinics of the Medical Department of the State University will be held at Iowa City December 8th and 9th, 1914. A full announcement will appear in the Journal at a later date.

MEDICINE IN IOWA PRIOR TO 1876

D. S. FAIRCHILD, M. D.

The Iowa State Medical Society.

The early history of the Iowa State Medical Society is difficult to obtain as the first volume of transactions was not published until 1871, and contained only the proceedings of the meetings of 1867 to 1871 inclusive. The transactions from 1850 to 1867 were apparently lost, but the roster of the officers from the organization in 1850 was preserved. We are able to fill in some data from obituary notices of the deceased members found in Vol. 1 and Vol. 4 of the printed transactions and from the Oration on Medicine delivered by Dr. Geo. F. Jenkins, printed in Vol. 14 of the Iowa Medical Journal.

It appears that Dr. John F. Sanford representing the College of Physicians and Surgeons, located in Davenport and afterwards in Keokuk, attended the meeting of the American Medical Association in Boston, May 1, 1849. Dr. Sanford was so impressed by the appeal to organize State Medical Societies that on returning home he wrote many letters to physicians urging them to meet in Burlington June 19th, 1850. Dr. Jenkins says: "Dr. Sanford fearing that letters alone would not be sufficient to create an interest in the undertaking, took the stage and went to Keosauqua, Fairfield, Mount Pleasant, Washington, and Davenport. From there he took the steamer for Muscatine, Burlington, Fort Madison, and Keokuk. He spent a day in each town calling upon the physicians and urging them to attend this meeting called for the purpose of organizing a State Medical Society. On June 19th, 1850 twenty-five physicians gathered at the court room in Burlington, Dr. J. F. Sanford acting as temporary chairman and Dr. E. D. Ransom, Burlington, as temporary secretary. "Prof. Sanford delivered an able and eloquent address on the objects contemplated by the convention and which should engage its attention during the present session."

A committee was appointed to prepare and present a constitution. The Committee consisted of Drs. J. F. Henry, and E. Lowe, of

Des Moines County, Dr. McGugin of Keokuk, Dr. Elbert of Van Buren, and Dr. Witherax of Davenport.

The following officers were elected:

Dr. E. Lowe, Burlington, President.
Dr. Elbert, VanBuren, 1st Vice President.
Dr. McGugin, Keokuk, 2nd Vice President.
Dr. Mathews, Burlington, Recording Secretary.
Dr. Sanford, Keokuk, Corresponding Secretary.
Dr. G. R. Henry, Burlington, Treasurer.
Dr. J. F. Dillon, Librarian.
Drs. J. F. Henry, McGugin, Elbert, Hull, Brookbank, E. D. Ransom, and Flint Censors.

In addition to the election of officers and the appointment of committees; by permission of Dr. G. F. Jenkins we present the following report of the meeting taken from the Burlington Tri-Weekly Telegraph.

"The convention is eminently respectable in appearance, and anyone would see at a glance that it embraces among its members all the learning known to the profession, and the numerous and able speeches made by various members during the debates of yesterday evinced a high degree of talent. Indeed, taken as a whole, it is perhaps the most respectable convention which has ever assembled in our state. There are many gray beards among them, who while adding dignity and weight of character to the convention, also give tone and direction to the proceedings. Among these may be mentioned as particularly active upon the floor, Dr. McGugin, an old practitioner and formerly a politician of some prominence in Ohio, but more recently a surgeon in the army and at present a resident of Keokuk, and Dr. J. F. Henry of our own city, each of whom being naturally good talkers entertained the convention during the discussions of the day with several handsome efforts. Others who took part in the debates sustained themselves very creditably—and if they could be kept together a month or so there is no telling which of them would not come out an accomplished speaker. Several legal gentlemen dropped in during the day to hear the debates, but they generally went away with the impression that their craft was in danger, and that the gift of gab was breaking loose among the professions generally."

Dr. Lowe, on being conducted to the chair, made a brief and appropriate address in which he returned thanks to the association for the honor which they conferred upon him. This is a compliment of no ordinary character, and it has been bestowed upon one who stands deservedly high, not only in his profession, but in the confidence and esteem of all who know him.

The convention, previous to adjournment yesterday evening, appointed a committee, composed of Drs. J. F. Henry, Ford and Hud-

son to report a code of medical ethics which will be made to the convention this morning.

P. S. Since the above was in type, the convention held an evening session; received and adopted the report of the committee on medical ethics and at a late hour adjourned sine die.

Charter Members of the Iowa State Medical Society.

Organized June 19. 1850.

The following is a correct list of names and addresses of the organizers of the Iowa State Medical Society:

Drs. E. Lowe, G. R. Henry, Phillip Harvey, E. D. Ransom, J. H. Rauch, J. W. Brookbank, H. M. Mathews, Burlington; John F. Sanford, J. C. Hughes, D. L. McGugin, E. R. Ford, Josiah Haines, Keokuk; N. Steele, J. Robinson, J. F. Moberry, Fairfield; John F. Dilion, Farmington; J. D. Elbert, J. E. Evans, James Flint, Keosauqua; J. J. Ellison, Wapello; E. G. Fountain, Davenport; J. H. Hershey, George Reeder, Muscatine; M. J. Morseman, Iowa City; W. H. Rosseau, Washington.

Seven of these organizers were afterwards elected president and one of them occupied the chair twice. Dr. John F. Sanford did more to promote the organization of the society than any one else, called the meeting to order, made an able address, acted as chairman during the organization and should have been considered the first president. He was a graduate of the University of Pennsylvania and was for many years one of the most prominent surgeons in the state. He was the prime mover in this organization of the College of Physicians and Surgeons of Keokuk and was professor of surgery in that institution for four years. He died in 1874

Dr. J. C. Hughes was a graduate of the University of Maryland. He was professor of anatomy in the College of Physicians and Surgeons for three years, was promoted to the chair of surgery in 1853 and continued to ably fill this chair and was also dean of this institution for twenty-eight years, till his death in 1881. Dr. Hughes was one of the most able and impressive teachers of surgery in the West. His students always loved him. He never forgot their names or faces and could always recall them readily many years afterward.

He was an excellent surgeon and had the greatest reputation and largest practice of any surgeon in Iowa. He was surgeon-general of Iowa during the Civil War, and as such he had much to do with providing surgeons and assistant surgeons. He conducted the medical department of the Iowa State University then located at Keokuk, largely for the purpose of educating surgeons for the army, and each year a large number of the graduates were commissioned as surgeons and assistant surgeons and went to the front. This is the chief reason why the Keokuk Medical College had more graduates in the medical service, in the Civil War, than any other college in the West. He was a great advocate of medical organization and

was a charter member of the Keokuk Medical Society, also of the Iowa State Medical Society, of which he was twice president.

Dr. D. L. McGugin was a graduate of the University of Maryland. He was a surgeon in both the Mexican and Civil wars. He was an eminent scientist, a scholarly physician and a splendid teacher and held the chair of principles and practice of medicine and was president of the medical department of the Iowa State University for many years. He was elected president of this society at its second annual meeting. He died at his home in Keokuk in 1865. Dr. John F. Henry located in Burlington in 1845. He was a graduate of the University of Pennsylvania and taught obstetrics and diseases of women in the Ohio Medical College before coming to Iowa. He was president of his society in 1861. His death occurred in Burlington in 1873.

Dr. Enos Lowe of Burlington was the first president of this society. He was an able and distinguished physician. He removed to Omaha in 1854, but was surgeon of the fifth Iowa during the Civil war. He died in 1880.

Dr. John H. Rauch of Burlington was president of this society in 1858 and was a leading physician in Iowa for nine years. He afterwards achieved a great reputation as secretary of the Illinois State Board of Health. In his day, his opinion on health laws and regulation of Medical Colleges was more quoted than that of any other sanitarian in this country.

Dr. Phillip Harvey of Burlington was president of this society in 1868. He was professor of principles and practice of medicine in the Keokuk Medical College during the Civil war. I (Dr. G. F. Jenkins) heard him deliver the president's address in 1869, on the climatology of Iowa. In it he states that malarial fevers are caused by a miasm produced by the decomposition of vegetable matter, and he further states that the exciting cause of yellow fever is the combined miasms of decomposing animal and vegetable matter.

Dr. John D. Elbert of Keosauqua was the third president of the Iowa State Medical Society. He received his medical education in Cincinnati, under Dr. Daniel Drake, and held an honorary degree from the University of Pennsylvania. He was quite a celebrated surgeon and had an extensive practice in Southern Iowa and Northern Missouri. He died in Keosauqua in 1865.

Dr. George Reeder of Muscatine was president of this society in 1854 and for many years was one of the most distinguished physicians and surgeons in that part of the state. His death occurred in 1864.

Dr. J. F. Dillon graduated from the College of Physicians and Surgeons at Davenport, Iowa, in 1850 and became a member of the society at its first meeting in Burlington, June 19, 1850. He also had the honor of writing the first article in the first number of the first medical journal published in Iowa. The journal was published

at Keokuk and was called "The Western Medico-Chirugical Journal." Date September 1, 1850. The first article is entitled "Rheumatic Carditis," Autopsical Examination," by John Forrest Dillon, M. D., Farmington Iowa. It is a very interesting article and foreshadows the future success of the author.

The following autobiographical sketch of Dr. John Forrest Dillon, afterward the distinguished Judge Dillon, is taken from a letter to Dr. Geo. F. Jenkins and published in the Iowa Medical Journal Feb. 1908.

"I was born in the state of New York on December 25, 1831. My father moved with his family, of which I was the eldest, to Davenport, Iowa, in July 1838, I being then a little less than seven years of age. I lived in Davenport from that until 1879, when I came to New York to accept a professorship of law in Columbia University, and the position of general counsel of the Union Pacific Railroad Company.

I commenced the study of medicine when about seventeen years of age in the office of Dr. E. S. Barrows, at Davenport, Iowa. Dr. Barrows was a prominent physician and successful surgeon, having been a surgeon in the United States Army in the Seminole Indian war. He had wonderful skill in diagnosis and was a bold and successful practitioner. He made very little use in his ordinary practice of any other remedies but calomel, blue mass, Dover's powder and compound cathartic pills.

A year or so after I entered the office of Dr. Barrows as a student, was formed the Rock Island Medical School, the prototype or original, as I understand it, of the present College of Physicians and Surgeons of Keokuk, Iowa, of which you are the president.

I attended one course of lectures at Rock Island. The next year the college was removed to Davenport, Iowa, where I attended a second course and was regularly graduated in the spring of 1850 an M. D.

The professors as a body were able men, some of them men of great learning and even genius. Abler teachers than Professor Richards, who taught practice, Professor Sanford who taught surgery and Professor Armor who taught physiology, it would have been difficult to find in the chairs of any contemporary medical institution.

I happened to attend the first meeting of the Iowa Medical Society in 1850, at Burlington, in this way. Having been graduated I desired to seek a place in which to practice my profession and I consulted Professor Sanford, having an admiration and affection for him. He said, "I have lived many years in Farmington, Van Buren county, a small place on the Des Moines river, but my duties in connection with the medical college are such that I have resolved to change my residence and follow the college to Keokuk." Dr. Sanford had obtained great celebrity as a surgeon and indeed had out-

grown the little town of Farmington. He suggested to me that his leaving Farmington would create a vacancy which would perhaps make that town a desirable place for me in which to locate. When I reflect that I was really under twenty years of age, without experience, the idea that I could go to Farmington and occupy in any degree the place which Dr. Sanford left seems now to me almost amusing. I resolved, however, to take his advice and so arranged my journey from Davenport to Farmington as to enable me to attend the first meeting of the Iowa State Medical Society in Burlington in June, 1850.

After the lapse of fifty and seven years I distinctly recall that meeting and I regarded it then, as I have regarded it ever since, as an assemblage of men of remarkable learning and ability. Among those present were Sanford, Hughes, McGugin, Henry Elbert, Fountain, Haines, Lowe, Ransom, Rauch, all distinguished names.

My exchequer was far from plethoric and I was obliged to practice strict economy. I rented for an office a small brick building on the crumbling bank of the Des Moines river, one story high, about twenty feet square, in a dilapidated condition, at a cost of $4 per month. I engaged board and lodging at a boarding house kept by Mrs. Corwin, where I made my home during the three or four months I remained in Farmington, at a cost of $3.50 per week. Among the boarders was a young lawyer by the name of Howe, who had resided in Farmington some little time. We became well acquainted and spent nearly every evening walking up and down the banks of the Des Moines river, speculating upon what the future had in reserve for us. He was almost as destitute of clients as I was of patients.

There were at least two old established physicians in this place, Dr. Barton and Dr. Lane. How could a young man under twenty years of age expect to find employment under these circumstances unless both of these physicians were engaged or out of the place? I will mention one case with a little particularity since it was epochal, having had the effect of changing the whole current and career of my life. On the hills near Farmington, about two miles distant, there was a large brick yard. On a hot August day the men worked hard, and their skin being relaxed and their appetites vigorous, they ate a hearty supper when a cool and grateful breeze sprang up and swept the valley. These workmen sat out in it, become chilled and two or three hours afterwards were seized with violent attacks of cholera morbus. They sent post haste to town for a physician, both Dr. Barton and Dr. Lane were absent and there was nothing to do but to call on me. I had no horse or buggy of my own and if I had I would have found it difficult to have driven over the rough roads and as for many years I had been troubled with inguinal hernia, I could not ride on horseback. The last time I attempted to do so nearly cost me my life. There was no alternative

but to walk to the brick yard, where I found the men in great suffering, requiring liberal doses of laudanum and stimulants and my personal attention for several hours. Weary and exhausted I sought my way home on foot and I saw the sun rising over the Eastern hills just as I was reaching my lodgings. Maybe it was the sun of Austerlitz but I didn't so regard it at that time. Two or three years ago when Dr. Lorenz of Vienna was in this country he took lunch with myself and several gentlemen, one of whom mentioned I had formerly been a physician, whereupon Dr. Lorenz evinced curiosity to know why I left the profession, and I proceeded to give him the narrative that I am now relating. When I had finished one of the gentlemen said, "Now, that you have told all about this there is one thing you have not mentioned, did these men live or die?" to which I responded, "That question has been more than once asked but I have always evaded an answer."

This night's experience set me to thinking and the next evening when young lawyer Howe and myself were taking our regular wald up and down the banks of the Des Moines river I turned to him and said, "Howe, I have made a great mistake, I cannot practice medicine in this country without being able to ride on horseback, which I am utterly unable to do. I might as well admit the mistake and turn my mind to something else, I shall read law. Tell me, what is the first book that a student of law requires? He answered, "Blackstone's Commentaries." "Have you got them?" He replied "Yes, I have them and the Iowa Blue books of Laws, and those are the only books I have." He was kind enough to loan me his Blackstone and I began at once to read law in my little dilapidated office.

Another event in my brief medical career at Farmington is chronicled in the first number of the Medico-Chirurgical Journal of Keokuk, of September 1, 1850. It is the first article and first number of that publication, entitled, "Rheumatic Carditis," Autopsical Examination, by Jno. Forrest Dillon, M. D., Farmington, Iowa," thus connecting me in a slight way with the earliest medical literature of the state.

On inquiry of the present officers of the Keokuk Medical College I learned that they had no copy of the publication and I only succeeded in obtaining one through the kindness and courtesy of the Iowa Historical Association.

I shall not undertake to re-state the substance of that article; briefly outlined it is this: A laborer on the public works at the small town of Croton, about five miles distant from Farmington, suddenly died under circumstances that lead to a very general belief among the people of Croton that he had died from malpractice. The post-mortem examination disclosed, however, that he died of apoplexy caused by hypertrophy of the heart. The heart was found to be nearly double the normal size and the weight. It fell my lot after conducting the examination to take the organ in my hand and ex-

plain to the excited citizens the cause of the death and thus allay public excitement. The article concludes as follows:

"Before taking my departure from Croton, I took occasion to give the botanic physician some salutary advice, adverted to the unenviable predicament in which his ignorance had plunged him, and endeavored to inspire him with a love for scientific knowledge, by following the example of Le Maitre de Philosophie, in a Comedie of the celebrated Moliere, in which he endeavors to impress the truth of the following sentiment upon the mind of Monsieur Jourdain "Sans la science, la vie est presque une image de la mort." Whether I succeeded in convincing him of it, so readily as was the case with Le Bourgeois gentilhomme, the future must determine.

I have drawn up this hasty sketch of the above case for two prominent reasons, in the first place to present your readers with some additional testimony confirmatory of the frequent connection between arthritic and cardiac disease; and in the second place, to illustrate the great benefit often derivable from necroscopic examination. The one is frequently overlooked, the other too sadly neglected."

In the fall of 1850 I concluded to return to Davenport where my mother and sister lived and take up my home with them and utilize my little knowledge of drugs and medicines and get a livelihood by opening a small drug store, which would also afford leisure time to enable me to read law. This I continued to do until the spring of 1852 when I applied for admission to the bar of the District Court of Scott County, Iowa, and on motion of Mr. Austin Corbin, a man very well-known afterwards in Iowa and elsewhere, I was admitted. The same year I was elected prosecuting attorney for the county and practiced law in Scott and adjoining counties until 1858, when I was elected Judge of the District Court of the Seventh Judicial District for the counties of Muscatine, Scott, Clinton, and Jackson; re-elected four years afterward. Was then transferred to the Supreme bench of the state and was re-elected six years afterwards. Before qualifying for my second term I was appointed by President Grant, United States Circuit Judge for the Eighth Judicial Circuit, comprising the states of Minnesota, Iowa, Missouri, Arkansas, Kansas, Nebraska and afterwards Colorado. I held the last mentioned office for ten years, until 1879, when I resigned the same to accept the professorship of law at Columbia University and removed East, where I have ever since practiced my profession. I find the little knowledge that I acquired of medicine and its principles not only to be a great satisfaction to me throughout my life but at times to be of utility, and I maintained a nominal connection with the medical profession until about the period when I came to New York by delivering each year lectures on medical jurisprudence at the Iowa University to the combined law and medical classes of that institution."

A Practical Beauty Hint.

The use of cosmetics and other artificial aids to attractiveness is as old as the human race. To Darwin and students of anthropology in general, decorative applications were a feature of selection—of attraction and sexual selection. The cheek covered with rouge, the heavily elaborated eyebrow and the colored wig, it appears, originated at an early period among courtesans. It has been remarked that "time has taken the taint from the tint," and the wide employment of artificialties to-day would seem to indicate the truth of this observation. The host of advertised medicaments, the beauty columns which grace or disgrace almost every metropolitan newspaper, the display-windows of the various department-stores catering to a large feminine clientele, bear further witness to the fact. The average man of rational clean mind does not approve of cosmetic innovations in his own feminine people. He would prefer to see these radical departures from the natural confined to the chorus lady and the public tangoist. The physician always warns against the use of cosmetic preparations, because most of them are dangerous. To him the natural and healthy has always seemed to be typical of beauty. Even the editor of the lay press, however, has seen the ridiculous in the beauty column, and the following satirical excerpt taken from a Southern weekly contains what is, in the opinion of the Journal of the American Medical Association, an ideal beauty hint: "For giving the face a good color, get one pot of rouge and one rabbit's foot. Bury them two miles from home and walk out and back once a day to see that they are still there."

The Spread of Trachoma.

During the past few years reports regarding trachoma among the reservation Indians and the mountain population of Kentucky and other states have stimulated interest in this disease. Investigation has shown that it affects many communities, to a greater or less extent, existing in a number of instances among school children. Attention has been directed to the great industrial establishments where large numbers of foreign laborers are employed. In each instance, when a focus of the disease has been found, its origin has been carefully investigated so that preventive measures might be instituted. J. W. Schereschewsky of the Public Health Service has examined the 5,962 employees of the Youngstown (Ohio) Sheet & Tube Company with reference to the prevalence of trachoma. He found among them seventy-six cases, a rate of prevalence of 1.3 per cent. Nineteen cases of suspicious conjunctivitis were also observed. Of the employees 28.5 per cent. were Americans. Among 1,700 Americans the rate of prevalence was 0.23 per cent., and among the seven foreign nations represented the rate ranged from 0.9 to 3.0. After careful inquiry as to the time these men had been in the United States, Schereschewsky expresses the opinion that with but few exceptions the disease was contracted subsequent to landing in this country, and in the great majority of instances while the men were employed in East Youngstown. It was not thought that the disease had been spread to any great extent by conditions in the mills. Close physical contact and the use of the common towel and hand basin are known to be favorable to the spread of trachoma, but these conditions do not prevail in the works of the company. Most of the foreigners do not wash in the mills, and those Americans of the skilled labor class who do, have their own buckets or vessels and towels. One possible source of infection in the mills is the habit of the workmen of removing from each other's eyes foreign bodies that may lodge therein, although they are instructed to apply to the medical service for relief. Attention was directed to the living conditions of the workers, and here

Schereschewsky discovered the chief source of infection. Many of the lodging-houses of the workers were much overcrowded. Thus, in one instance twenty-three lodgers were found in a four-room house, as many as ten or twelve in one room. Insanitary conditions prevailed in East Youngstown as well as in the immediate surroundings of the men. The presence of recent cases showed that the disease was gradually spreading from foci of chronic cases in a state of acute exacerbation, some of which Schereschewsky observed. In most instances, perhaps, as at East Youngstown, the cases are among laborers from foreign countries who have been in the United States a comparatively short time. The inspection at the ports of entry serves to detect practically all cases that have reached a stage at which diagnosis is possible; an immigrant when he lands may have the infection is such an undeveloped state that it cannot be detected and he may then in a short time become a focus for the spread of the disease. The employers of labor in the great industrial establishments should be warned of the seriousness of trachoma, and especially of its liability to spread. The health authorities of the cities and towns where these establishments are located, says The Journal of the American Medical Association should realize their responsibility in this matter. Bad housing, overcrowding and lax personal and community hygiene will contribute to the spread of this highly infectious and disabling but wholly preventable disease.

Oyster and Typhoid Fever.

There are seasons of the year when the instances of infection with the organism of typhoid fever can be traced to their source. The greater outbreaks are usually due to infected water, milk or other foods, while the smaller groups and isolated cases can best be explained by contact infection. The carrier has been shown to be the link between hitherto unconnected cases. For many years no form of air infection (except dust) has been said to be a cause of typhoid, the reports of outbreaks of dust-borne typhoid fever in the Spanish and Boer wars and in India are based on the flimsiest evidence.

We have not forgotten the ubiquitous house-fly as a frequent carrier of disease, say The Journal of the American Medical Association. In many of our states, however, insects of this type are excluded as effective agents of infection because of the climate during the colder months of the year, so that we cannot fall back on the convenient hypothesis of "transmission by flies." Ever since Conn's report indicating the occurrence of cases of typhoid fever in epidemic form as the result of the use of oysters contaminated with sewage, there has been a growing tendency to attribute the origin of much of the winter typhoid fever in certain districts to sewage-polluted bivalves.

It is time to ascertain whether this attitude toward the oyster is justified by the facts. Oysters are a highly prized article of diet wherever they are obtainable. Despite the increasing enforcement of rigid regulations concerning the vending of oysters that are free from pollution according to the standards of such representative bodies as the Bureau of Chemistry of the United States Department of Agriculture and the Rhode Island Shell-Fish Commission, the prejudice against this food-product has, justly or unjustly, increased in may quarters. To consider only the alleged responsibility of the oyster in the causation of winter typhoid, we may ask what its habits are at this season. Gorham has shown that during cold weather oysters rest or hibernate; movement ceases and feeding does not occur, and the oysters become practically free from sewage organisms, even when lying on sewage-polluted beds.

As such facts seem to throw some doubt on the wisdom of attributing winter typhoid to the oyster, Joseph has made a bacteriologic study of the oysters sold in Baltimore. The aim of this investigation, conducted in the Laboratory of Hygiene and Bacteriology at the John Hopkins University, was to ascertain whether the oysters sold in one of the most prominent markets for these products in the United States contain typhoid organisms derived from the intestinal tract, and whether their content varies with the seasons of the year.

The bacterial findings indicate that the oysters sold in Baltimore are in general free from sewage contamination. Those few lots which would be condemned by the most rigid standards were obtained at times of the year when the weather was quite warm—a fact of no little significance in view of the tendency to prolong the oyster-eating season beyond the limits of the colder months. One of the most striking points brought out was the distinct change in the character of the oysters, according to the time of the year. In the early fall the scores were high, in the cold weather of midwinter low, and again in the spring. On no occasion were the bacteria which cause typhoid found.

Too Many University Students in Germany.

Special Cable to "The Philadelphia Press" (Copyright, 1914, by the Press Publishing Company, New York "World.")

Berlin, June 20.—Too many university students is the odd complaint in both Germany and Austria.

The trouble in Berlin and Germany as a whole concerns the medical students mainly. The flood has grown so rapidly that the Ministry of Education is puzzling over some way to lessen it. Two or three remedies have been proposed, one being to limit the number of foreign students at each university. This would be an extension of rules promulgated a year ago. A large increase in entrance and tuition fees and a raising of the standards of admission have also been suggested. The recent contentions between physicians on the one side and State insurance boards on the other have shown how overcrowded the medical profession in Germany is.

In Austria the complaint is general. Prof. Wettstein, rector of the University of Vienna, in a recent appeal to the Austrian Diet for money for a students' home asserted that scores of students are living under such conditions of poverty that they are half starved and sometimes without shelter. In some instances, he said, the student is unable to go to his room at all during the day, as it is used as a workshop. They are actually forced to spend their spare time in cafes and cheap restaurants.

The overcrowded conditions and the strife for education among young men unable to meet the expense of it even by working while at college, are reported throughout Austria.

The cause is said to be competition for Government positions. It is frequently said that Austrian universities are chiefly factories for turning out State officials, and the latter are increasing at a rapid rate.

Whole-Time Professors in Clinical Teaching in Medical Schools.

The action taken by Johns Hopkins Medical School in accepting and applying the gift of Mr. Rockefeller to create "whole-time professors" of medicine and surgery has created some discussion in the journals as to the wisdom of this course. It is often contended that a clinical professor who devotes his whole time to university hospital service is apt to become somewhat narrow and perhaps less efficient as a teacher than if he was required to do a certain amount of private independent practice.

It may be granted that men who would likely be called upon to accept a professorship in the great universities like Johns Hopkins, would be high grade men who could earn much larger incomes by private practice than the salary paid by the institution itself. It is understood that

the three whole-time clinical professors at Johns Hopkins receive $10,000 salary each, but it may safely be presumed that men of the qualifications fitting them for these places, would have something in mind more than earning money. The honorable position and the opportunities to do research work would be very attractive, no doubt, to a certain class of very high grade men.

It appears that Dr. Theodore C. Janeway has accepted the professorship of Medicine, in Johns Hopkins Medical School as a whole-time professor. His associates are Dr. W. S. Halstead in Surgery, and Dr. John Howland in Pediatrics. It is quite probable that the whole-time clinical professorships will be the accepted plan in our greater institutions, covering at least the three important branches already mentioned. It is probable also that the sentiment will gradually turn towards that plan.

Preliminary Proof Required for Roentgenograms.

(Ligon vs. Allen (Ky.), 162 S.W.R. 536)

The Court of Appeals of Kentucky reverses a judgment for alleged malpractice in the treatment of a fractured humerus because of error in the admission of certain roentgenograms when the necessary preliminary requirements had not been established. The court says that the witness merely stated that he took the photographs. He did not state that they correctly represented what he saw, or how they were taken, or that he had ever taken a roentgenogram before, or knew anything about how they ought to be taken. No assurance was given as to the character or accuracy of the Roentgen-ray machine, or its condition or working order. While it may not be necessary to establish all of these facts in order to make roentgenograms admissible in evidence, the accuracy of the photographs must be established, for, if they do not show what the witness saw, they have no place in the case. The rule is recognized by all the authorities that when the witness fails to make a roentgenogram admissible by testifying to its accuracy, it is not admissible and should be rejected.

Dr. Theobald Smith Becames Director of New Institute.

Announcement has been made by the Rockefeller Institute for Medical Research that Dr. Theobald Smith, now professor of camparative pathology in the Harvard Medical School, has accepted the position of director if its new department of animal pathology. This department has but recently been established, and the fact that Mr. Rockefeller has added $1,000,000 to the endowment of the institute for the support of this department, and the Mr. James J. Hill has pledged $50,000 for its use in the study of hog cholera became known only a few weeks ago. The department is not yet organized or equipped, but it is expected to begin active work within a year. In the meantime, Professor Smith will continue his connection with Harvard University so long as may be necessary to complete work on which he is now engaged at its medical school. He has had a distinguished career as a pathologist and bacteriologist and is considered as one of the world's foremost bacteriologists.

Dr. Walcott's Retirement from the Board of Health.

On May 19 Dr. Henry P. Walcott's term of office as a member of the Massachusetts State Board of Health expired. After thirty-three years of faithful and distinguished service on this important board, much of the time as its chairman, Dr. Walcott is unfortunately not a candidate for reappointment. Indeed the personal sacrifice he has already made for the welfare of the community is greater than might be asked of any man, and merits the appreciation and lasting gratitude of the public and of the profession.—(Boston Medical and Surgical Journal).

Honor For Dr. Flexner.

It is announced that the President of the French Republic has recently conferred the cross of Chevalier of the Legion of Honor on Dr. Simon Flexner, director of the Rockefeller Institute for Medical Research, for his services to science in the treatment of epidemic cerebrospinal meningitis.

BOOK REVIEWS

Annual Report of the Chemical Laboratory of the American Medical Association. Vol. 6. Jan. to Dec. 1913.

The first subject discussed in this report is the relative quality of drugs furnished by physicians supply houses and by pharmaceutical companies. It has been frequently asserted that the products of physicians supply houses were of poor quality, but this has not been shown to be true, that the physicians supply houses shows a wider range of variation for instance, one-fourth grain hypodermic morphia sulphate from fourteen physicians supply houses showed a morphia content of from 84.2 to 115.7 per cent. From five regular pharmaceutical houses, showed a variation of morphia content of 95.2 to 102.4 percent of the amount claimed.

Several other comparisons were made of commonly used drugs with practically the same results.

The conclusions reached by the chemist of the Association was to the effect that there was little difference between the alleged drug content of the products of physicians supply houses and regular pharmaceutical houses. It is admitted that there is less uniformity in the products of physicians supply houses. The physicians supply houses "do not deliberately adulterate or sophisticate their standard drugs, their products are evidently produced by those who are less competent and less skilled than are those of the regular pharmaceutical houses".

The Report sets forth many important facts the practitioner should know. It is the purpose of the Association's chemist to correct the errors that creep into a physician's practice in one way or another, and help him on the right track.

Medical Gynecology. By S. Willis Bandler, M. D., Adjunct Professor of Diseases of Women, New York Post Graduate Medical School and Hospital. Third Thoroughly Revised Edition. Octavo of 790 pages with 150 original illustrations. Philadelphia and London. W. B. Saunders Company, 1914. Cloth $5.00 net. Half Morocco $6.50 net.

The question very naturally arises how to separate medical from surgical gynecology. We would naturally infer that the medical side would be associated with the surgical side and that one would go with the other and so we were interested in finding the boundary line. After going over the book carefully we have concluded that it is an appeal for a more conservative treatment. After the usual methods of diagnosis are presented, we have the "methods employed in medical treatment" detailed, urethra, bladder and vagina, methods of medical treatment which tend to relieve distressing conditions without operative measure, for instance in the treatment of leukorrhea a very careful investigation is made as to the cause of the conditions, and the treatment confined to intrauterine applications unless the pathology is in uterine-body. The author very wisely holds that the curette should not be used when the pathology has extended beyond the uterus. We have ourselves seen disastrous results following a curettage under such conditions. The preparation and application of pessaries is more fully presented than in any work on gynecology that has come to us recently. Massage, electricity and hydro-therapeutics receive considerable attention and are believed to be of considerable value in stimulating tissue metabolism. The Nauheim bath is particularly recommended. Nearly 60 pages are given to the influence of internal secretions. Very little space is devoted to theories or speculation, and the author proceeds directly to the means to be used in disorders which are rather definitely known to be caused by disease of the various organs of internal secretions. This is an interesting chapter and should be carefully considered by the medical gynecologist.

A group of menstrual disorders including amenorrhea and dysmenorrhea, generally to be considered as medical conditions, are often believed to be related to some disturbance of the functions of organs of internal secretions, and should not be overlooked in studying the cause of these disorders.

Referring to Uterine Bleedings: after considering the causes of this condition and employing the various means of medical treatment, emphasis is placed on the necessity of great caution in not overlooking possible early cancerous conditions, and missing the time for successful surgical treatment. A great number of conditions which particularly afflict the female sex are considered in this book. Of these we can only mention a few which appear to us to be of unusual value to a medical practitioner.

In addition to the important conditions above referred to, the chapter on "Associated Nervous Conditions in Gynecology" is particularly commended, and earnestly recommended as valuable and helpful to the conscientious practitioner who is not infrequently resorting to some surgical procedure when surgical treatment can only increase the nervous distress of the patient.

The Committee on Inquiry Into the Department of Health Charities and Bellevue and Allied Hospitals in the City of New York.

Calls in Section 4 and 5 of the reports to nursing services in these institutions.

The criticism appears to be that an inadequate number of nurses are employed due to insufficient institutional appropriations. For the care of adults patient during 1912 in Kings County Hospital, there was one trained nurse to each 21 beds. In Metropolitan Hospital General Service, 1 trained nurse to each 24 beds; City Hospital, 1 trained nurse to each 42 beds; Bellevue Hospital, exclusive of special services, about 950 beds and 24 admissions yearly per bed, 1 trained nurse for each 16 beds.

In regard to the ratio of nurses to sick children in Harlem Hospital, it is 3 nurses to 28 children: in Gouverneur 3 to 30; Metropolitan. 3 to 26; in City Hospital 3 to 16; as contrasted with the Babies Hospital 3 nurses to 9 children—a non-municipal hospital.

The Committee found that in the municipal hospitals the childrens wards were overcrowded, making it necessary to discharge the children on short time attendance and inadequate treatment.

The Committee recommended radical changes to provide for more beds.

It is the opinion of Children's Specialists appointed to study the condition, that two complete services be arranged for, one at Bellevue and one at Kings County Hospital.

Clinical Hematology. An Introduction to the Clinical Study of the So-Called Blood Diseases and of Allied Disorders. By Gordon R. Ward, M. D., Fellow of the Royal Society of Medicine, Medical Society of London, Etc. Octavo of 394 Pages. Illustrated. Price $3.50 net. W. B. Saunders Company. 1914. Philadelphia and London.

On turning to the Preface, we find in a few words the purpose of this book. "This volume is primarily concerned with that clinical study of the so-called blood diseases which has been so much overshadowed by exclusively pathological investigation. It is secondly concerned with the classification of blood diseases inasmuch as this is a necessary preliminary to any understanding of their nature."

Chapter II points out a clear classification of morbid processes in organs which have to do with blood-forming, followed by a chapter on blood-forming organs themselves considered in a general way. Then a chapter on blood examinations.

These three chapters form a most excellent introduction to a diagnosis by blood examinations, and points out the significance of blood findings in its bearings on diseases of certain organs.

We are constantly reminded that a diseased person is not purely a laboratory subject, but that a complete examination and study is impossible without a study of the blood by laboratory methods.

Chapter IV. is devoted to Generalized Affections of the Blood-Forming Tissues which includes the leukemias. Hodgkins' disease is considered in Chapter VI.

Considerable space is given to localized affections of blood-forming tissues. Three interesting chapters are devoted to increased red cell formation, Anemias, and Atrophic Anemias, and Secondary Anemias.

We cannot consider all of the subjects presented in this book, but the practitioner will find in it a useful help in working out the problems that will appear in the diagnosis of diseases of the blood and diseases of the blood-forming tissue.

Transactions of the College of Physicians of Philadelphia. Third Series. Volume 35. Philadelphia. Printed for the College. 1914.

This old society consisting of the most famous practitioners in all departments of medicine and surgery publishes an annual volume of papers of great merit, and keeps alive the best traditions of this early center of medical progress. These papers are classics in medicine. The

circulation of these volumes is necessarily limited but they are permanent records which may be drawn from with the greatest advantage by the scholar in medicine.

The care of the Baby. Supplement No. 10 of United States Public Health Service. Washington. Government Printing Office. 1914.

General Surgery, John B. Murphy, M. D., Chicago . Practical Medicine Series, Vol. II. 1914. Price $2.00.

Eye, Ear, Nose and Throat. Casey Wood, Albert H. Andrews, W. L. Ballenger, all of Chicago. Practical Medicine Series, Vol. III. 1914. Price $1.50.

These books are too well known to need much notice. For several years the Practical Medicine Series under the editorship of Dr. Chas. L. Mix have found their way to the reading tables of hundreds of physicians. Every year the books improve some way—more complete and comprehensive, better illustrated, etc., and the above volumes are up to standard. They cover the literature of the past year and make ready reference possible over a wide range.

Medical and Surgical Reports of the Episcopal Hospital of Philadelphia, Vol. II. 1914. Edited by Astley P. C. Ashurst, M. D.

A detailed report of the work done in the Episcopal Hospital for 1913, together with a number of papers by members of the staff.

The papers by Drs. Ashurst and Mutschler on Fractures of the Femur are especially important. A number of the contributions deal with bone lesions and are meritorious.

The custom of any hospital embodying its important work in a volume such as this is commendable.

Anatomy and Physiology of the Eye and its Appendages, by J. Welsh Croskey, M. D. Philadelphia General Hospital, Philadelphia.

This little pamphlet is the outgrowth of the instruction given to students and nurses at the Philadelphia General Hospital during the past ten years. The author believes that if the anatomy of the eye is thoroughly understood, it renders subsequent study less difficult.

Every effort has been made to simplify the text so that the subject matter can be readily understood.

A very comprehensive, practical treatise, giving the essentials.

SOCIETY NOTES AND NEWS.

The last meeting of the **Appanoose County Society** was held on the evening of July 29th at their head quarters in the Library building, Centerville.

Dr. Harris reported a case of Vincent's Angina. Dr. U. L. Hurt of Numa, reported a case of Infantile Paralysis. Dr. B. F. Sturdivant presented a case of Infantile Paralysis. Dr. Davis of Seymour presented a case of Raynaud's Disease, the president presented a case of Thymic Dyspnea and some cases were presented illustrative of a talk to be made later on Back-ache.

As a part of the second anniversary of the Washington County Hospital, one afternoon (Aug. 13,) of the Washington County Chautauqua was given over to the hospital.

Mr. Marsh W. Bailey, who was chairman of the Board which built the hospital gave the history of the movement. Mrs. A. Anderson spoke of the place of The Woman's Auxilliary in the present hospital movement. Dr. Alanson M. Pond gave the principal address of the afternoon, on The Place of the Hospital in the Small City.

Dr. Oliver T. Clark and Miss Mae L. Wyatt of Keokuk were married June the 25th. They left for Chicago where the doctor has been doing post-graduate work since the first of the year.

Dr. M. L. Turner of Des Moines announces that he is now limiting his work entirely to pediatrics.

Organization Notes.

"You cannot climb the ladder of success any faster by stepping on the fingers of those you are passing."

We cannot force men to be progressive, but we can give them the opportunity. We cannot make some men see that progressive medicine consists in something more than graduation, a few medical books and magazines. All we know is that, somehow, the progressive men are always at medical meetings.

When you stop to think of it, how many doctors are there who really do things, that do not identify themselves with medical organizations. Look at the men who are leaders in the profession who have accomplished things worthy of note, you will find that they belong to medical societies. The stimulus, learning and the avoidance of ruts which they have all required to reach the summit probably was received in part from their County, State or National Societies. To be big men requires association with others.

Why not get those members who never attend the meetings of the Society to read a short or long paper on "Why I do not attend the meetings." The Committee on Program might arrange for a symposium in that way on this subject.

The relations existing between the members of a medical society should be like one big happy family in which each member tries to help the other members and to work for the common good. If one has found a particular remedy useful in the treatment of a certain disease or has any good item of a medical nature, he ought to pass the good things along at our meetings; some other member may be eagerly looking for just such information. If each and every member endeavors to do something of this nature, our meetings will be chock-full of good things to all. Leave backwardness, selfishness and fear at home in bed, bring optimism, energy and a helpful spirit along with you.

It is a duty we owe our patients to read the best journals we can buy. That great journal of the A. M. A. should be read by every physician. Our own state produces a journal that we need not be ashamed to have on our desk. It is absolutely necessary in order to be abreast with general medicine and surgery to be a subscriber and reader of a number of the leading medical papers that can be purchased for a few dollars each.

Did you ever contemplate the pitiable condition the medical profession would occupy if the American Medical Association did not exist?

The circumstances of each physician—be he member or not—is improved because of it.

We as doctors should stand together closer in our business dealings. Every other branch in our country has a so-called gentlemen's agreement in business matters. It should be every doctor's aim to give his patient the best service possible, should charge his patient a just charge according to his walk in life, and should use every means possible to collect that charge. It is bad business to ever cut or reduce a bill after it is presented. Cutting or shaving a bill makes the patient question your honesty, you lose his respect and he goes elsewhere.

To the young members of our profession whose interest and activities in the societies give promise of a brighter and better day, let us look hopefully for the new dawn and the establishment of a new era, when strife will cease and warfare be forgeotten; when peace will prevail, and unity abound among the brethren.

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ADDRESS ON SURGERY

BORDERLAND CASES AND TEAM WORK IN SURGERY

ARTHUR D. BEVAN, M. D., Chicago.

I am delighted with the opportunity of being here today and addressing the Iowa State Medical Society on a surgical topic. One subject that has attracted my attention a great deal in the last few years has been this subject of borderland cases, and the necessity of men in different lines of medical work doing team work in order to obtain the best results. Sometimes I am afraid that we are becoming simply cogs in a big machine—merely members of a very large syndicate. I don't know, however, but what it is distinctly in the evolution of medicine, and means very much better results for the science of medicine and for our patients. Not very many years ago the general practitioner could without very much difficulty learn all that there was actually to be known of value in medicine, and I can very well remember as a young practitioner in the early eighties of being in contact with general practitioners who did know the whole field pretty well, and who gave their patients the benefit at that time, probably, of better medical knowledge and medical skill than could have been obtained at that time from a group of specialists. I remember along about 1895, we discussed this subject before the Chicago Medical Society under the title, "The Specialist in Medicine." My friend Dr. Patrick, who is here today and will address you this afternoon on a neurological topic was author of one of the papers in that symposium, and at that time it was rather regarded as being possible for the beneral practitioner to give his patient the

benefit of the best knowledge that could be obtained. For instance, I myself in that symposium related the fact that I knew a practitioner who could handle typhoid fever or appendicitis equally as well as they could be handled by the internist in his community, or by the men who were specializing in surgery; that he could take care of a woman in confinement or do a Caesarean section; that he could take care of a pneumonia or do an empyema; that he did very good general work; and I remember very well making the statement that I believed a general practitioner with wide knowledge could handle a thousand patients to better advantage to the patients themselves than those patients could be handled if they were in the hands of ten different specialists.

Now I am quite willing to say that my opinions have changed, and changed very decidedly. I have had the opportunity since that time, especially in the last twenty years, of working with a group of men who have worked as a team. That team is composed of a number of different men: men in internal medicine, men in neurology, men in pediatrics, men representing the head specialties, men who limit their work to genito-urinary surgery, men who are doing nothing else except laboratory work, such as the making a Wassermann test or the development of autogenous vaccines; and I have come to the conclusion that today it is impossible for us to give to our patients the benefit of the best medical and surgical knowledge unless it is given through such a team.

Now, how are you going to develop such a team? If it is a difficult matter in a large center of population, it certainly will be a more difficult matter in small centers of population. Take a specific instance. I have never made a Wassermann test; I do not know the technic. I have never made an autogenous vaccine; I have never made an x-ray plate in my life. I very seldom make a cystoscopical examination, and have never done dozens of things that are now necessary in analyzing and carrying on the work in some of the more complicated cases that present themselves to us. Can one man cover this entire ground? I think not.

I believe this rather complicated picture which I am drawing is responsible in part for that curse of division of fees which has swept over the country, and which is fortunately being gradually sponged off the map. That sort of thing is simply one of the evidences of the necessity of syndicating to a certain extent a good many of our more difficult medical problems.

I am not going to offer a suggestion as to a practical way of meeting this situation, beyond this general fact: that I believe the situation exists; that medical men today must look forward to the time when, in order to do the best work, they must do team work; that men must specialize in order to do the highest type of work in certain fields; and that certainly in the more complicated cases it will be necessary for us to call upon a number of men very often for

assistance. I suppose that as we look the ground over, the result probably will be something like this: that we shall have thoroughly competent general practitioners in our smaller communities—men who in many ways are much more competent than any one of the specialists who are developed in the larger communities, because they will have to have much wider horizon. Such men will handle the ordinary cases in the community. In the larger communities of 10,000 people, let us say, it will become necessary for men to organize together in some way—either in some close way or some loose, affiliated scheme, by which a group of men can give to patients the benefit of knowledge possessed by a number of different specialists.

In the largest communities, where we have, for instance, a hospital of two or three hundred beds, it is not difficult at all to manage the sort of team work among the members of the staff that is best adapted to produce these results. I should like to tell you very briefly of some of the practical workings of the plan which we have been attempting to carry out in the hospital at which I am working, and give you several specific cases illustrating the necessity of this sort of team work, and some of the results; and as two specific instances let us take such cases as kidney lesions or lesions of the upper abdomen.

In lesions of the upper abdomen we have been working these cases with a group of men consisting of an internist, a laboratory man, and x-ray man and a surgeon; and this is about the method which we have adopted: The internist analyzes one of these cases—let us say a case in which the question of diagnosis is that of stomach, duodenal or bile tract lesions. The internist analyzes the case carefully from his point of view. He is assisted by associates in the laboratory in making the necessary tests to determine the presence, for instance, occult blood, the stomach examination tests, the general examination of feces, urine, etc. He arrives after an analysis of all of the facts which are at his disposal at a diagnosis from the clinical evidence which is within his reach. Then the x-ray man is called in; he works as a partner in this general scheme. He takes whatever pictures are necessary or makes whatever examination with the screen seems desirable in that particular case; and finally he and the internist determine upon the diagnosis. That diagnosis must be both anatomic and pathologic and they draw on a diagram their diagnosis in that particular case. They say that all of the clinical evidence and the x-ray findings point in this particular instance, we will say, to an obstruction at the pylorus, which is marked from the x-ray findings by definite changes in the contour of the stomach at the pylorus, and from all of the evidence they believe that the lesion is at the pylorus, and the pathology is, let us say, carcinoma. Then the surgeon is called in and the case is submitted to him. He goes over these findings and agrees or disagrees with the facts in the case, and if it is agreed that it is a surgical case, and one in which a surgical

operation for relief is necessary or a surgical operation for diagnosis is necessary; and with a definite understanding that a diagram has been made by the internist and radiologist of the findings of their examination, the abdomen is opened and the surgeon confirms or disapproves at the autopsy **in vivo** of the findings of the internist and the x-ray man, and these men must be present at the time of the operation to see just exactly what the pathology is. In that way we have been able to carry on a scheme of what you might call a clinical research, quite as important, I believe, as any laboratory research, quite as high a type of research as any form of medical research that we can institute. It gives the internist definite information as to the value of the evidence which he has been able to obtain. It gives the laboratory associate those facts, the radiologist those facts; and of course the researching of a diagnosis from the standpoint of the internist and of the radiologist is of enormous value to the surgeon who finally operates. In a certain sense he has about the same relation to the internist as the pathologist has when he makes a post mortem in a surgical case.

I would like to say in this connection that we have found some very interesting facts as a result of this clinical research, which I shall present to you very briefly. We have divided the evidence which we are able to obtain this way under four groups: (1) the history of the case; (2) the evidence obtained from laboratory findings; (3) the evidence obtained from physical examinations of various kinds; (4) lastly, in a separate group we have placed the evidence obtained by the radiologist.

I am sure you will be interested to know this fact: that the evidence of the greatest value, which overshadows everything else in this medical research and stands out very clearly, is the accurate, properly interpreted history. I would say without any question that that overshadows entirely all of the other evidence in our work.

In the second place, but not anywhere approaching from the standpoint of value the accurately taken and well interpreted history, comes the physical examination; and you all know how much depends on a man who is making the examination—on the training and experience of the examiner. You all know how difficult it was, when you as medical students made your first examination, let us say, bimanually, of the female pelvis, to determine even the presence of the uterus; how gradually, after learning how to make these bimanual examinations, you could learn how to feel not only the uterus, but its exact position, and sometimes even the ureters under certain conditions; and how your value as an examiner from the standpoint of physical examination multiplied many fold with experience and proper practice. Of course that is true of physical examinations in general.

The third item of value in these examinations is that of the laboratory findings. I would not at all wish to belittle the value of

laboratory findings. I have for years conducted my own laboratory with assistants, and I believe that a laboratory in close contact with the clinical department is not only essential, but that it should be in such close contact with the clinical department that the clinicians are in the laboratory and check up the findings, and have a definite working knowledge of what is done in each individual case. At the same time I should like to say that laboratory findings are, on the whole, as you look at them from the standpoint of their value in the sum total of evidence, rather a disappointment. That is absolutely true in the surgery of the upper abdomen. There are some things that stand out with a great deal of clearness, viz: the evidence of blood, and the suggestive value of the absence or excess of free hydrochloric acid. Of course in some cases, as the evidence obtained, let us say, in a case of amebic dysentery, would be not only suggestive evidence, but absolute evidence or the presence of tubercle bacilli in the urine. But on the whole, the laboratory evidence does not at all compare with the value of the clinical findings. I want to emphasize that point, because many of the younger men who are coming on in their work with a good knowledge of laboratory methods, give altogether too much importance, comparatively, to the value of laboratory evidence as compared to the value of a good history and the gross clinical findings, such evidence as might have been elicited fifty years ago by a Trousseau or by a Gross. These still remain the big, valuable pieces of evidence in medicine.

Now, lastly I should like to say a word in regard to the x-ray. The x-ray has become one of the distinctly essential factors in the practice of medicine. Nobody today can do good fracture work, even such gross work as fracture and dislocation work, without the aid of the x-ray. Is that a dangerous statement to make? Possibly it is, but it is absolutely true. When you have a patient twelve miles off in the country with a difficult, uncertain injury of the hip, which the greatest surgeon in the world cannot diagnose absolutely without the x-ray, why not admit the fact that you are simply making a diagnosis, which is a probable diagnosis, from your measurements and your examination, but that you cannot make an absolute diagnosis in that particular case, unless you have the benefit of good x-ray technic? The x-ray is absolutely essential, and yet there is a danger in it of the enthusiasm that accompanies the development stage in any line of work. There is a very actual danger today in the x-ray in gastro-intestinal work. Time and again I have had brought to me a patient with x-ray plates showing I am told a duodenal ulcer, and the diagnosis has been made from the x-ray; or this patient has a voluminous cecum; this patient has a low-lying, transverse colon which should be stitched up in normal position; this patient has this or that diagnosis made with the x-ray. Very often we find upon checking those cases up that there is absolutely no evidence of the lesion diagnosed by the radiologist. I want to empha-

size that fact. There is no possible excuse for a diagnosis being based, especially in gastro-intestinal work today, on the x-ray alone, with the exception of some cases where, of course, we have absolute evidence, as we do sometimes have from the x-ray. For instance, one does not hesitate today to accept the diagnosis of kidney stone from x-ray with very good differentiation. There the diagnosis is absolute and not suggestive; but in most of our gastro-intestinal work which is presented to us today the evidence presented by the x-ray is merely suggestive not absolute, and it should be simply regarded as one of the pieces of evidence which we can obtain, and which should be checked up by the internist and by the surgeon in arriving at the final diagnosis. I want to especially emphasize that point. Such very good men as Cole in New York, Case in Chicago, men who are technicians of the highest type in x-ray work, become so enthusiastic in x-ray work that they say the x-ray is one of the most valuable piece of evidence in gallstone diseases. What do they know about gallstone diseases? As a matter of fact the x-ray is of very little value in gallstone disease. They see a large group of cases from which they can pick out twenty or thirty in which gallstones have shown. The surgeon sees a thousand gallstone cases in which possibly thirty, forty or fifty might show in the x-ray plate if they had all been radiographed and plates of the best differentiation obtained. But what does that mean? It means that in five or ten per cent of the cases gallstones will show. Is that a piece of evidence upon which a diagnosis is to be based, or much reliance is to be placed? Not at all. In gallstone disease, if you take a group of one hundred or a thousand cases and analyze them very carefully, what is your diagnosis based on? Almost entirely from the history and the physical examination, and you rely little at all upon x-ray findings.

I believe, members of the Iowa State Medical Society, that the time has arrived in the practice of medicine when we should attempt to make clinical researches in different fields of work—clinical researches by groups of men who are particularly qualified to make these researches; that men who cannot obtain their Wassermann tests, their x-rays, their cystoscopic examinations and catheterizing the uterus, must place themselves where these examinations are necessary, in touch with men who can make them, and can give the patients the benefit of this sort of team work; and it is in that way, with such clinical researches, that we are going to make very great progress in the next ten or twenty years in medicine.

Mr. Chairman, I want to say another word, if I have a few minutes' time, and it is on rather a different subject, but one which is very close to my heart, and one to which I have devoted a great deal of time and thought, and which I believe should be taken up by the profession, and especially by our state medical societies. I want to give you this thought, in the year 1914, for the profession:

Medicine a Function of the State.

I believe that the time has come when medicine is one of the great forces in modern civilization and should be recognized by government, and in our country by state governments, as one of the great functions of government. I believe that the possibilities of preventive medicine today are such that the people of each state should be given the benefit of those possibilities; that each state should devote enough money by appropriation to develop a State Board of Health of the highest type; that each county should have its commissioner of health in close contact with the State Board of Health, so that the people throughout the state can be given the benefit of the great possibilities of modern preventive medicine. I believe that the time has come when the State Licensing Board should see that the men who enter the profession come properly prepared, and that the state should be very careful not to permit itself to become the dumping ground of the poorer medical schools in this country. I believe the time has come when the state should be a good deal of research work, and should feel called upon to do the same sort of research work in medicine for human beings that it is doing for agriculture and for domestic animals; and they are devoting a great deal of money and thought to those subjects. I believe that the time has come when medical education should be recognized as a state function. You will be surprised, if you have not looked into the subject, to find that everywhere throughout Europe, with very few exceptions, medical education is a state function. And certainly throughout this country, with the exception of a little frontage on the northeastern coast, including only six or seven states, we are very rapidly coming to the time when medical education in this country will be carried on by the states. You here in Iowa have a great opportunity. You have but one medical school, which is a very fortunate condition, if the school is properly organized and handled. If the entire profession of Iowa will get back of this idea of making medicine a state function, in the highest and best sense of the word, you will do more for the people in your community and more for modern scientific medicine than you can do in any other possible way. I want to urge you, as I have been in my capacity as chairman of the Council on Medical Education of the American Medical Association urging every other state in the Union, to take up this new gospel of the American Medical Association, "Medicine a Function of the State."

I want to say this, too: that I had the opportunity yesterday of going through the State Medical School in Iowa City. I was very much delighted to see the great possibilities that there are there of developing a school of the best type. I believe that if the medical profession of the State of Iowa get back of this movement for the development of a great state medical school, and place the State

Board of Health upon the right basis, you will accomplish a very great deal. I leave that idea with you, Mr. Chairman—Medicine a Function of the State.

TUBERCULOSIS, SOMETHING OF THE PRESENT SITUATION AND NEEDS IN IOWA*

H. V. SCARBOROUGH, M. D., Oakdale.

The situation in Iowa to day with regard to tuberculosis is not satisfactory. As a state, we have not by any means progressed as we should and but for a few items we might be said to be almost marking time. For criteria as to our progress I am taking not only what we should have accomplished, but also what our neghboring states have accomplished.

I attribute this slowness of improvement in our State along this line partly to the general attitude of indifference that has characterized health matters generally, in the past, but also, in a measure to the unwillingness, so frequently met, for the voting of adequate money for expenditure along for the work, and mostly to lack of organization.

A campaign against tuberculosis is pre-eminently a campaign of education. All phases of tuberculosis work require explanation and interpretation as well as accentuation. The principal reason why tuberculosis has destroyed its hundreds of thousands for a time covering centuries, is the lack, for a long time, of real knowledge as to the germ that produces it; of its contributory causes; its methods of spread and, finally (even today) of much as to the very nature of the disease itself. Even today the physician who after so many years of study should know it best, is, too frequently calling it "a running down," a "cold", a "grippe," a "pneumonia", etc. The very fact that the question of diagnosis is so frequently up for discussion, is proof that we are yet as a rule, compartively unenlightened as to the disease and are striving to educate ourselves to a point of greater efficiency.

The greatest obstacles to our progress is the overwhelming lack of belief in its prevalence, as to its deadliness and the need for yet greater effort against it; which lack of belief is the direct result of our still existing lack of complete knowledge. Some of us still do not believe tuberculosis is present till abundant sputum and numerous tubercle bacilli proclaim loudly that it has been long existent and that pulmonary tissue has been severely affected and is being finally broken down. Many of us do not yet believe that the slight cough or slight constitutional disturbance is worth careful investigation, and real interest is too often not secured until the patient

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shows advanced anemia, emaciation or the hectic flush. More of us, that is a majority of us, do not believe an incipient tuberculosis is more than a so-called "pre-tuberculous" stage or a "threatened tuberculosis", nor that it is necessary to treat with rest in bed, a patient who still feels good and looks good, even if we admit he has a small amount of tuberculosis present. Especially so if he has gotten over the acute attack or at least the acutest of his attack and again feels fit to resume his work. Here the cause of frequent and disastrous error is the lack of real knowledge as to the almost universal tendency of this disease to burrow treacherously and progressively along without the patient feeling or showing signs of its presence. And we are surprised some day to find the patient unexpectedly coming down with a severe relapse from which he eventually fails to get up. I often say that if this disease always made its victims equally as ill as other diseases of the same consequence, we would have a comparatively easy time of it, for in that case, all would be ready to take sufficient care.

And finally, and most unfortunate error of all, we fail to appreciate the reality as to its very great prevalence. A correcting of this belief will be necessary to a more successful handling of the campaign against it. Since it is treacherous and more often concealed than it is revealed, we must look for it and remedy it, and must not, as at present too frequently happens, wait until it looks for us.

Our campaign of education therefore to be most successful, must be sufficient to reach us all and to furnish us more nearly sufficient knowledge, so that belief may come about and sufficient care in all respects be generally taken.

It may not be sufficiently evident to be at once accepted by all, but it is a fact that real interest in tuberculosis work in Iowa today is much too rare a thing. Interest likewise depends on the belief in the necessity for effort. No two or three nor even two or three dozen men in this State can, alone and of themselves, do what is necessary. And what we lack generally, is interest. Therefore my appeal today for this work so that the campaign of education may be pushed; for we need the knowledge, belief and interest without which, closer diagnosis, more rational treatment, more facilities and more organization and effort cannot possibly be secured.

Iowa today does not entirely lack all or even many of the elements of an intelligent and an efficient campaign to eradicate tuberculosis. We have an educational department under the Board of Control. We have County Hospital Laws; a start on county hospitals and a State Sanatorium. There is a committee of the State Medical Society that is to further, among other things, the combat against tuberculosis; and the State Board of Health gathers statistics and puts out much good advice and information. But who will contend that we have an up-to-date progressive campaign, as active for instance as in Wisconsin? No one will admit that unorganized effort

gives as good results as organization. In Iowa today, organization is lacking and without it, our work against tuberculosis is suffering —our campaign of education halts and hesitates, and sufficient knowledge of the right kind is not achieved. Our work at present is not always intelligently directed; there is lost motion, friction, inaction and we do not get results. There is haphazard and spasmodic effort even along the line of legislation, and all this mostly for lack of organization and intelligent direction of effort.

Organization in this State has never yet been given a fair trial and now that the work has gotten to the place where important and expensive facilities are being secured, it is high time that we get together on some concerted plan of action and secure some form of a committee, society or commission whose duty shall be to correlate and coordinate our efforts as well as to promote the progress of the work.

One of the many reasons why it is so highly important that our effort be organized and a sound plan evolved, is that already the lack of a definite and intelligent plan is shown by the weak and erratic character of legislation so far enacted with regard to tuberculosis, as well as the present lack of much legislation that is really needed.

We shall, as things now go, soon be accused of asking for what was not of first importance—if indeed we are not already open to that accusation and this must surely hinder the securing of future help. A studied program of legislation with all forces behind it for recommendation is imperative, and that soon.

Moreover, the situation in Iowa is not sufficiently like other states to enable us to safely adopt cut and dried plans—especially those in force or advocated by some states of the farther East where vastly different conditions as to population and housing exist.

Nor will the simple presentation of a program with proper recommendations be sufficent. There must be study of problems with publicity as to findings and careful, adequate education of both public and medical profession as to the needs of the situation before enactment will be secured. A medical profession that is divided as to opinion on account of lack of study of the situation will preclude good results as it has heretofore. Unnecessarily excessive differences of opinion of medical men is the cause of many of our failures to get needed medical reforms. Although this lack of comprehensive plan is self-evident and its importance without question, there has been practicallly no effort to overcome the difficulty. Iowa is not alone in this matter, in fact, few states have as yet a definitely mapped out program and it is probable that, as is the case in Iowa, no State but still has some old defects of law or campaign machinery yet to overcome because of delay in arranging a carefully correlated program.

Harm has already been done and is being done by the present lack of standard tuberculosis legislation and every day is multiplying its

further likelihood. Instances are capable of being presented where what has already been done will require much effort to undo and, as well, may create future confusion and misunderstanding. For instance, already hospitals have been projected and built for tuberculous patients at county poor farms in unsanitary locations and have been constructed in a poor manner. We have thus allowed our haphazard campaign to get ahead of our judgment. Before the work goes further the possibility of wrong location and poor standard of building and care should most certainly be corrected. If we need moral support or more argument for this phase of the work, it is found in the fact that many other states have these corrective laws. One thing will be favorable about our lack of some of the important features of legislation. If care is taken future wants can be presented in a correct form and further necessity for its correction or amendment will be avoided. Some features of needed legislation can be well postponed for a time without present detriment. Others should be in operation now and require immediate emphasis in the general educational campaign and before the legislature. Other features will need careful preliminary education of the public before it is safe to enact them if the path of wisdom be followed. Such a one is the provision for the compulsory segregation of the wilfully careless and the grossly ignorant and indifferent consumptive. I evidently see but little of the sum-total but it is discouraging in the extreme to see, as I do frequently, the almost immediate return of many such from the sanatorium to a family of young children. These are the ones to whom you cannot effectively appeal upon any grounds or by any argument. They are deaf to all moral responsibility and insensible and indifferent to all danger to family, friends, or public. We cannot say it is infrequent, for it is frequent. How can we get anywhere when we cannot and do not prevent it? This legal measure is badly needed today and must come soon, but it is most probable that it would fail of usefulness if it is not preceded by an educational preparation of the public mind leading to a greater demand for it.

The number of things we do not have but must have are many. But it is useless to enumerate and discuss them all. Fundamentals we must first have, later we can easily have a chance to work out a system.

Adequate disinfection is not now carried out to any appreciable extent. This must speedily come. Control of tuberculosis cannot be had otherwise. This disease spreads not so much by casual contact as by continued exposure. The terror of the average public at the possibility of any personal contact with a consumptive is proverbial but they fail signally to yet be sufficiently alarmed at the liklihood of infection through contaminated dwellings, offices and other public places. Comparatively speaking, the outdoors can take care of itself. Spitting on sidewalks while vile and dangerous,

is a comparatively safe thing if compared with lack of disinfection of consumptives' rooms before re-occupation. A well-drawn law is absolutely essential to control and is highly advisable even if, for some time, it be more honored in the breach than by its observance. Disinfection should be more frequently done at public expense. Although it may not seem just, we can afford at least at first, to be generous with our help in disinfection even where private initiative would seem to be called for. If we do not secure it, even to the extent of public expense where private parties could pay for it, then we fail of our subject and indirectly allow the infection of the public and ourselves notwithstanding our own care.

Other tentative regulations prohibiting the handling of foods, etc., by consumptives should be made into definite and effective laws and these should be enforced. Neither the public or the medical profession know to what a flagrant extent this abuse really exists. How can we prevent the infection of children and the public generally, when candies and foods are made, handled and sold by emaciated consumptives.

Patent medicine frauds; protection of employees against dust, long hours, and unsanitary surroundings and also lack of requirement for dairy cattle testing and on other subjects need attention and proper laws to govern, but under our present haphazard way of recommending them and getting them, we cannot wonder that we do not have them.

It is regrettable that the state, once having committed itself to the policy of registration of cases of tuberculosis should ever have receded from this stand. Like the ostrich with its head in the sand, we do not in the least rid ourselves of the danger by deliberately disregarding it. We cannot know the extent of our peril or secure adequate help to avoid it unless we accurately ascertain the end results of infection—the number of cases and death rate. Full effort to eradicate the disease will not come but with full realization of the need.

Samuel Hopkins Adams, a layman, aptly says,—"Vital statistics are the very basis and foundation of any attempt to better the general health. Knowledge of what is killing us before our time is the first step toward saving our lives."

No good reason can be adduced why notification should not be had. Unnecessary publicity can be avoided by a carefully drawn law. Failure to report will assuredly be difficult to overcome at first, but that point must be met some day since registration must surely come. Moreover, the passage of such a law will in itself help to educate and careful work will soon bring it to a useful efficient stage. Whoever is actually opposed is standing in his own light and those who are indifferent are also hindering the progress toward the efficient control of the situation.

The magnitude of this fight is just beginning to dawn on the

state and no help is being gotten from the promulgation of the idea that the death rate is already being markedly reduced. A study of what statistics are available will disabuse the mind on this point.

Besides the general educational measures carried out by a tuberculosis commission, committee, society or whatever force is placed in charge of the work, and beside the work among laymen now being done under the supervision of the board of control, a very important educational work is yet to be arranged for and carried forward. It is obvious that early diagnosis is absolutely necessary to the control of tuberculosis. It is also plain that on the general practitioner rather than the special man, must fall the burden of detecting cases early. Of two hundred (200) consecutive admissions recently made at Oakdale consisting presumably of 111 incipient cases, 86 moderate ly advanced cases and three far advanced cases, it was found that only 33 were incipient while 83 were moderately advanced and 84 in place of three, were far advanced. This is altogether too great an amount of misdiagnosis. In 76 per cent of the cases there was error as to degree. If figured on the basis of the usual chance of recovery it proves that the average case when he arrives, has only half the chance that he is supposed to have according to the application. That is, the average case has his chances reduced from the 75 per cent which he would have if he were incipient as he should be at the time of the recognition of his disease, to 37 per cent as he is on the average when he is received at Oakdale and yet these case are, as much as possible, the better class of cases so far as we can select them.

If then the status of early diagnosis be at the stage where over two-thirds of cases are detected when past the early stages it is wise to develop a method for help at this point. County societies are laudably active in including this part of the subject with much frequency but more symposia, clinics and other measures are needed.

In this connection it might be noted that it is expected that an arrangement will soon be completed so that to a limited extent special workers will be available, expense free, to county sicieties from the sanatorium staff or by affiliated workers for talks or papers relative to our work at the sanatorium and on diagnosis and phases of tuberculosis generally. Local effort is however, the best and only permanent aid and it would seem best that societies should pay even more attention than usual to this subject and besides having frequent papers by their own members, invite good men from other societies for special work along this line.

If the campaign is to be successful there must also be the interesting of more of the physicians locally for special duty. Half the good of a society for the study and prevention of tuberculosis is the interest it develops, and spasmodic interest like spasmodic effort, will get the movement nowhere. The layman is already beginning to look with distrust on the physicians of Iowa because of faint enthu-

siasm and lack of co-operation and interest. Nothing is more needed or will so tend to dispel this distrust as the help occasionally of the physician in local laymen's meetings and other work especially such as that of tuberculosis Sunday.

So far as investigative agencies in Iowa are concerned we practically have none. Dispensaries are needed. Visiting nurses in cities and also for county work, promise great good, but very few are yet provided. The inspection of school children is almost everywhere lacking, especially with a view to ascertaining the prevalence of tuberculosis. The results of such inspections if done by specially trained tuberculosis workers, would surprise and shock the state.

The hospital facilities of the state for handling tuberculosis are of course, entirely inadequate. The state charitable institutions for the insane and feeble minded are being adequately provided with tuberculosis hospital buildings. But outside of this there is only one private hospital with a capacity of thirty; and only one Munger law hospital built for tuberculosis patients, and that not yet quite ready. There is only one specially built county hospital under the new law, It has a capacity of ten in a county of 100,000, and at that is located at a county poor farm. As might be expected, very few can be gotten to go there because of the location. In a number of states the law wisely prohibits the placing of tuberculosis hospitals at the county farms.

Oakdale has a capacity of 125. It is usually overfull and always must refuse acute advanced cases. During its entire existence it has lacked infirmary space, laboratory and medical headquarters. This is to be remedied before another year. Until lately, the support funds have been so inadequate that care and diet could not be sufficiently supplied. Every state sanitorium receives more applications from advanced cases than for early patients. To remedy this a building to care for sixty incurable cases is being begun at Oakdale at once. This will help out very much the working of the institution there, but without doubt it will be filled in a very short time after its completion. It is hoped that it may be ready and fully occupied before the next legislature adjourns, and also that the physicians of the state generally, will use their best endeavors to acquaint legislators thoroughly with the needs, so that appropriations may at once be made for the completion of this advanced hospital by the addition of another large wing and the erection of a central administrative building which could not this year be built for lack of funds.

A children's department is badly needed at Oakdale. Many are necessarily refused because of this lack. Since all cases having extra-pulmonary tuberculosis also need sanitorium treatment, it is probable that we shall see the day when a department will be provided for surgical and miscellaneous cases of this disease. We now have to refuse these extra-pulmonary cases in some numbers. Only a consistently liberal financial policy will bring Oakdale up to the stand-

ard of the states of this region and enable us to do work not only worth while, but also comparable to that of neighboring commonwealths. The attitude of Iowa physicians will dictate the financial treatment of the institution.

The institution at Oakdale should be very close to the medical men of the state and we are always glad toi receive visits of inspection. Much would be saved both to the physician and to ourselves by afuller understanding. The class of work done and the class of cases we can receive would be better known.

We find patients do not take the care they should simply because they have not learned how. Therefore we encourage them to remain for a reasonable length of time before returning home till their condition will admit of their standing some indiscretions without so much likelihood of relapse. Four times as many good results are gotten by patients staying with us six months as by patients remaining one month or less. Applicants for admission must have lived in Iowa for the previous year and must have sent in before admission, the proper blanks secured from the superintendent of the sanatorium and completed by the family physician and the county sanatorium examiner. Patients should not be sent to the institution for admission or examination until a letter is written to make sure of possibility for their being received or taken care of.

Patients are now necessarily first placed in cottages containing nine other patients and later in rooms containing two. Careless or disobedient patients cannot be kept. Dissatisfied, exacting or quarrelsome patients are not encouraged to stay. Patients must abstain absolutely from tobacco and liquors and must not exercise without permission or leave the institution for town without our consent. After the first of the year it is expected that a number of incurable, advanced patients can be received.

This institution has in times past, and will continue to be, at least to some slight extent, subject to some criticism. In fact every tuberculosis institution and hospital does, and state institutions especially cannot escape it. The nature of the ailment treated and the peculiar attitude of this class of patients makes it so that misunderstandings and complaints are not entirely avoidable. Since the law passed by the last general assembly increasing the price of treatment and the amount therefore available to us, from the previous figure of $30.00 per month to $45.00 per month as at present, it has been easier to provide reasonably well for patients. It is obvious, however, that in this day of high cost of living no luxuries can be expected where board, room, laundry, medicines and the care of physicians and nurses are secured for the sick people for that figure. It is more-over not the policy of the state to do more than provide essentials and this is right. Private sanatoria and hospitals should be taken advantage of by such patients as can afford to pay for their treatment at such institutions. Private institutions giving the same

grade of treatment as given at Oakdale cannot profitably charge less than double what is paid with us, while private institutions giving the best of diets, private rooms and up-to-date treatment cannot charge less than $125.00 and upwards per month. It is obvious therefore, that only a medium grade of accommodations can be given and no private rooms be had at Oakdale to escape contact with other and often less congenial patients.

Institutions like ours which frankly admit that they care for consumptives have, moreover, exceeding difficulty in securing employees and rarely can get the efficiency that is secured elsewhere and which is needed. Efficient, ready-to-hand nurses and attendants cannot at our salaries be secured. We have to educate and fit them to our needs. Occasionally we are necessarily without sufficient numbers to fill our positions, and trouble, with cause for complaint, cannot be avoided. It is a fact, however, that no tuberculosis instituition even though luxurious, can avoid having many complaints, it will be found that if a patient be of the proper kind for the state institutions for the tuberculosis he will, if he has the right spirit of co-operation get along reasonably well and cause of complaint will be found either to be not justified or else not avoidable with the facilities which we are provided. It is always necessary to take into consideration these phases of our work in gauging the satisfaction secured to these sick and harassed individuals. Misfits among patients are frequent in disposition, finances and tendencies, and it is obvious that no discrimination can be allowed in the care or attention regardless of payment or non-payment of treatment or of previous circumstances or of tastes. A sanatorium head of an institution where several times as much money is provided as we have, makes the statement that a patient is almost invariably more trouble to treat than his disease and he assures me that as much trouble is found where better accommodations are furnished as with us.

Available beds for consumptives are practically always in sanatoria and separate hospitals. General hospitals almost invariably reply to requests for admission of the tuberculous, that they can be received only in an emergency and transiently. The total number of available beds for all degrees of tuberculous cases in Iowa in sanatoria and county hospitals is today approximately one hundred and seventy (170). And one hundred and ten (110) more beds in hospitals are appropriated for, or with buildings in process of construction. In state institutions under the Board of Control and not including Oakdale, there are in wards, annexes, small buildings or hospitals already planned for or constructed, beds to the number of one hundred and seventy-five (175) where tuberculous patients can be placed. One hundred and fifty (150) more beds have been asked for at these institutions with probability of sufficient appropriations in the near future. These numbers look large when collectively considered. Yet, it must be remembered that in all cases many more patients are wait-

ing than can be cared for even when all the buildings planned shall be completed and in use.

For our one hundred and seventy (170) beds in three sanatoria, Wisconsin has four hundred and fifteen (415) beds in eleven sanatoria, with a gratifying corresponding result in the care of consumptives. The tuberculous poor of the great city of New York are much better provided for than the general run of Iowa's tuberculous citizens. The city of Chicago alone, which is in our own part of the middle west, with a population only three per cent higher than the whole state of Iowa, has many more beds available than have we, yet in addition this municipality is just finishing and putting into operation a large new municipal sanatorium with a capacity on opening of six hundred (600) and an ultimate capacity for nine hundred (900). It is foolish economy for Iowans to keep the money in their pockets and not adequately provide for such cases as have tuberculosis and cannot provide for themselves. Necessarily someone is now paying the expense and that at a higher total cost than if they were adequately treated and yet without the saving of life that could be if they were well provided for or the saving of infection that follows and without the misery and inhumanity, the extent of which few physicians or other people of Iowa realize.

The need for a place to send advanced cases is unquestioned and it's acute necessity is probably known to few men in Iowa as it is known at the sanatorium. From the moment of the opening of that institution it has been a struggle to preserve it for the early cases. It was not the policy laid down by law to accept the advanced cases, nor was it possible to do so and preserve the work of the institution for curable cases; nor yet could the advanced case be sufficiently cared for with the type of accommodations built or with the facilities provided. The very great need and value of a place for curable cases is, and has been unquestioned; but, because of the need of protecting the uninfected, especially when the patient or relatives are poor or in moderate circumstances only, the necessity for hospital accommodations for the incurable cases in Iowa is of paramount importance. It is often heart-rendering to hear the recitals of need, fear, of lack of sanitation and inability to secure help, care or place to go, especially when, as most frequently happens, children are exposed.

There is exceedingly good argument to show that care of the advanced consumptives should be first, but which ever should have been first begun, it is without possible chance of controversion that it is expedient, humane, necessary and an actual economy to isolate and care for at once, advanced cases of tuberculosis. It is a sorry fact that in certain instances in Iowa medical men have by example and otherwise prevented the building and establishing of county institutions especially designed for the adequate care of advanced consumptives. It must be remembered that one such instance is much

more potent to turn back the hands of progress than the influence of many opposing laymen. Until a more generally consistent stand is taken by the medical brotherhood, we not only secure more than a very small percentage of room necessary, but what is more important, in fact, most important,—we will not get erected much more than shacks or sheds in many if not most instances. The last law placed on our statute book (chapter 40) and advertised as a way of solution is only a stepping stone and a very weak law at best. It is not only not mandatory, and that possibly is as well for the present, but it is so non-specific that it cannot, under the circumstances in Iowa today, be often or easily invoked. Efforts to build, under this law, have been fairly numerous, it having been considered more or less seriously in twenty counties but in only two or three instances has anything yet been accomplished. It is moreover, very important to note the fact that this law is without provision to control the standard of housing, feeding or care, and that in every hospital so far built under it, serious error has occurred either in location, method of construction or adequacy generally. This law is a preamble, only. It needs body and a whole set of new anatomy beside. The other and older law—the Munger law—is much better so far as tuberculosis hospitals are concerned it also lacks specifications and elasticity. Out of numerous efforts more or less strenously pushed there are, for five years' efforts three Munger law hospitals built. In the two hospitals first established there are no beds for tuberculosis yet provided. The other one promises to be excellent notwithstanding the lack of help and direction in the provisions of the law.

The question of the placing of responsibility for the care of the advanced cases is not an easy one to answer. Under conditions obtaining in the eastern states it seems reasonably certain that the county is the unit that should provide for this work. In our state and many of the states nearby it seems quite as certain that the county must not be alone depended upon. It has been my view, confirmed by considerable study of local conditions, that the state must not only have supervisory control, but must itself supplement the work by building advanced hospitals as well. In many counties in Iowa it will not for years be advisable to undertake any arrangement that would be sufficiently comprehensive to be just to both county and patient. If district hospitals are therefore substituted, let the state prevent friction, delay and inadequacy by taking charge directly and as soon as needed. The district system of this sort now in use for the care of insane works admirably. Authorities have said that counties having a population of less than 200,000 people should not undertake a county tuberculosis hospital. This is without doubt too high a limit, but it is probable that today only five or six counties in Iowa can afford an institution where an adequate standard of care can be given.

Logic, present slight experience and the experience of states

with more advanced knowledge, teach that the state should set the standard and approve all tuberculosis hospitals erected. The sooner this is adopted, the easier it will come and the less trouble it will incur in bringing existing hospitals up to the necessary level. Already we are able to find instances, detrimental to the work. One other thing in this connection needs adoption in connection with our policy and that is subsidy. The state should not as now, demand from the county, for its early cases at the sanatorium, the full pound of flesh for each case it takes care of, nor should the state expect all of its component counties to be equally enthusiastic and philanthropic so that they will unaided at once build and take care of their advanced consumptives. Well drawn laws alone will not be enough to bring up-to-date in a reasonable time this campaign for advanced hospitals. The burden becomes too intimate and the issue is much too easily drawn into local politics and made the plaything of local conditions, where the county alone is left to bear the burden unhelped. County hospitalization unsubsidized is not working out well alone and will not work out well alone in any kind of a reasonable time. The state should accept full responsibility and bear most of the burden for the county curable case and should in the more populous counties, require the county to accept the responsibility for advanced cases. Not only is this just but the division of the work would facilitate speedy and efficient handling. The state should collect a part only of the cost of the early case at Oakdale from his county and likewise for each advanced case cared for in a suitable manner in a county hospital should pay the county a certain fee or subsidy to equalize the burden. The state, morover, should set the standard for housing and care and withhold its help through subsidy until such standard is met.

States around us less prosperous and less progressive generally than we, are having their system of hospitalization work out rapidly and nicely by using subsidization. In fact, they did not have success until the subsidy was adopted. An investigation made by me recently of the system in use in all the states were state sanatoria and hospitals are provided, shows that in the majority of instances county and state combine to pay the treatment of incipient patients in state sanatoria.

In Iowa there is a gathering storm of discontent among county office holders at the shouldering of the entire burden of the sanatorium patients' cost by the county and it seems probable that if the matter be not watched by its friends, the enemies of this method at the next legislature secure the passage of a law making it necessary to get the consent of the county authorities before admitting into the sanatorium of a patient. This would be a calamity to the work of caring for curable cases at Oakdale. From my experience during the year since this law has been changed to its present county payment plan, I venture the assertion that if the admission of tubercu-

lous patients be made dependent on the consent of county authorities, the efficiency of Oakdale as an institution for curing the tuberculous will be practically wiped out thereby. It is so proverbially hard because of healthy looks and good feeling to find and diagnose the tuberculous case when it is incipient and curable and to get the patient to go to the sanatorium suffer the restrictions necessary and stay there long enough to secure an arrestment of the disease, that if it became necessary in addition, to secure the consent of the average board of county supervisors to the sending of a patient that looks, feels, acts well and is not overjoyed at the prospect of a stay in the sanatorium, then the 18 per cent of incipient cases we have so far been able with difficulty to select for our work, will dwindle to a negligable figure and our results will dwindle likewise. The figures for the last fiscal year at Oakdale show that we were able at the Sanatorium to improve only 61 per cent of carefully selected advanced cases and to secure an arrestment or symptomatic cure of only 14 per cent. Of incipient cases, however, we were able to secure the recovery of 71 per cent and to secure the improvement of 96 per cent. If then we are sent what cases the county authorities cannot find private parties to take care of and therefore are ready to consent to our receiving, it may be surmised that only the figures of the far advanced class quoted will obtain, and they may be cut yet very much lower because we will not get even selected advanced cases but rather the emergency, neglected and refused advanced case. What may be expected is obvious. We could not secure our present rates of results, nor could physicians expect often to get the favorable case to stay among the class of patients we would then have with us.

The board under whose management the sanatorium at Oakdale is placed cannot be expected to fight either for or against the enactments of the legislature and if the physicians of the state do not wish the change from the present system where any appropriate case can be taken if there is room, to the system where the consent of the county boards are necessary, then they must carefully watch and prevent such action even if indeed they do not favor and work for the speedy adoption of the more expensive but much more efficient subsidy system mentioned above with its probability of more rapid establishment of enough places to send advanced cases.

In conclusion, the sanatorium needs the increased moral support and better understanding by the physicians of the state. There are occasions of misunderstanding on both sides that a fuller knowledge would make plain and obviate. There are restrictions and inconvenient regulations and conditions of treatment that would be removed if it were possible with the facilities at hand for the work at the institution, some of which conditions should be removed and some should be taken kindly by the patient because they are wise. This institution is more than any other of the state institutions un-

der the board of control, for the benefit of the physician. If then this is the physician's own institution, the physicians of Iowa should take it upon themselves to see that the institution is provided for to suit their wants and enlarged so as to meet their needs and be enabled to be a credit to them and to the state. Other influences take care of the things in which they are most interested and it is a painful fact that money is lavishly spent in Iowa on things which it is not denied are worthy, but which are much less conducive to our general health and happiness and have for an object results that are much less valuable than this campaign where lives are at stake and not alone expedience, convenience, politics, civic beauty, honor, morals, racial betterment, or just the health of hogs.

THE RECOGNITION OF EARLY TUBERCULOSIS BY THE GENERAL PRACTITIONER*

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The general practitioner, whose work lies in all departments of medicine, has the important duty of detecting cases of early tuberculosis. On his skill and judgment depend whether these cases are to be diagnosed early, when they offer the greatest prospect of cure, or delayed until the disease—consumption—is evident to all, and cure impossible or imperfect. The family physician does not, as a rule, have the constant practice in examining morbid pulmonary conditions which is necessary to note slight changes in lung tissue. He does, however, have the opportunity to study the clinical symptoms, and his routine work tends to make him a keen observer. The most difficult proposition in medicine is to make a diagnosis of negative tuberculosis, for the disease may be present and exhibit such slight symptoms that the patient may not be aware of illness.

Phthisis is a disease of intermittent course; the real beginning is often passed over as an influenza or a prolonged cold, and it has generally advanced to quite diagnosable stages by the time the patient has discovered his real condition. In the study of a case, do not be misled by some of the more modern methods, as nothing can in any way take the place of a careful history of the past illnesses and subjective clinical symptoms. In dealing with tuberculosis, accurate knowledge of such history is the basis upon which correct diagnosis lies. Devote a great deal of attention to the information derived from close questioning of the patient. All evidence from all sources must be critically weighed before an opinion should be expressed as to the presence or absence of tuberculosis.

As Lawrenson Brown recently stated "The only medical man who has made no mistakes is the second or third year medical student just entering upon his clinical work." And adds,"I am convinced that the greater number of mistakes in diagnosis are due to careless-

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ness, 'lack of time,' 'a cold room,' 'during another visit'—is how we put it. Most errors have been largely of omission. I knew, but I failed to act.'' To quote a significant statement from Nothnagel: ''Faulty diagnosis due to superficial examination and hasty observation, is without excuse.''

A definite system should be employed in taking the history of a patient so that no fact of importance may be omitted. This may contemplate the use of printed forms, or simply following an orderly sequence in our questioning, at the discretion of the individual physician. A thorough and detailed procedure in establishing an early diagnosis would consist of:

1. A critical review of the family history; and
2. The past medical history;
3. General considerations, as to occupation, home surroundings, habits, &c.;
4. The story of the present illness;
5. The findings on physical examination;
6. The results of laboratory investigation;
7. The reaction to tuberculin; and
8. The study of the radiographic plate.

The importance of the family history lies in the exposure to infection, much more than the mere existence of the disease in ancestors, near or remote. At present we believe that tuberculosis is but rarely transmitted directly. However, certain physical traits and inherently weakened constitutions may be inherited, leading to decreased resistance against this and other infections. Investigate closely the health and causes of death of members of the family with whom the patient has been associated, not only for obvious tuberculous cases, but to obtain an insight into the nature of the family material. Many cases of death from indefinite causes or complication of diseases are really tuberculosis and it is imperative to ascertain whether the patient was exposed to the infection long enough to make this a factor in diagnosis.

Most observers now regard childhood as the time of infection by the tubercle bacillus, and the incidence of the disease in adult life is, in most cases, the result of such early infection. Therefore, we must inquire closely regarding slow recovery from measles and whooping cough, as these infections are frequently predisposing factors in tuberculosis. The existence of adenitis, especially cervical, formerly called scrofula, indefinite abdominal troubles, as well as any respiratory difficulties, are to be looked upon with suspicion. Later in life, several conditions deserve special consideration relative to tuberculous infection, and a questionable diagnosis should never be made until pulmonary tuberculosis can be positively excluded.

It is a well established fact that a large percentage of cases of pleurisy, dry or with effusion, not accompanying pneumonia or due

to trauma, are of tuberculous origin, and a majority of such patients later develop phthisis. Indeed, some good clinicians claim that pleurisy is a manifestation of intra-pulmonary tuberculosis, that is, a complication of a pre-existing lung process. At least, in the light of our present knowledge, we must consider that one who has had pleurisy, has had pleural tuberculosis and is very liable to clinical pulmonary tuberculosis. The greatest value of this observation is in its relation to treatment, as the occurrence of pleurisy is a clear indication for all such patients to be placed on a limited anti-tuberculosis regime.

There is a tendency to diagnose influenza or simple grippe too readily, without bacillary confirmation, as very frequently such attacks are really masked tuberculosis. Any patient with a so-called influenza or grippe which lasts longer than three or four weeks, accompanied by malaise, cough, and loss of weight, should be subjected to investigation for possible tuberculosis. The same may be said of bronchitis, and, when it exists unilaterally, is tuberculous bronchitis.

The common expressions, "run-down," "tired-out," "nervous exhaustion" or "general weakness," describes a condition often due to the toxemia from absorption of tuberculous toxins, and is an indication for critical examination. Vague states of ill health, especially with marked loss of physical or nervous energy with no obvious cause, may be the mask behind which pulmonary tuberculosis conceals itself until it is well established.

Indefinite fevers, slow fevers, atypical typhoid fever or unresolved pneumonia are frequently descriptive terms for an unrecognized tuberculosis, if certain infections such as malaria, endocarditis and sepsis, can be excluded.

Tuberculosis in other parts of the body, as evidenced by swollen joints, or pyuria, or scars from an old cervical adenitis, may often be of value in calling our attention to the necessity of making a systematic search for a focus of infection in the lung.

In the general consideration of the case, we must question the patient as to his physical type, whether he had been strong and robust or rather delicate in early life; also as to his susceptibility to coughs, colds, tonsillitis and other minor illnesses.

The character of one's occupation is of prime importance as regards the hours of work, the intensity of application, the ventilation, and the opportunity given for rest, proper meals, and regular vacations. When no chance for exposure to infection exists in the home, frankly discuss the possibility of tuberculosis in persons closely associated with the patient in the office, store or shop. For one careless consumptive has been known to infect a number of his co-workers.

We must not only consider the patient's working hours, but should understand the situation at home, which may be most unsat-

isfactory. We must inquire as to the location, surroundings, heating and ventilation of the home, as well as various rooms, the number and health of the occupants, the number of available windows, and whether the windows of sleeping rooms are kept open at night. If the house has not been occupied long by the patient, we should know something of the previous residents and whether the house was disinfected before occupancy by the patient.

Lack of sufficient sleep and nourishing food are important contributory factors in lowering one's resistance to tuberculous infection, in addition to the use of and abuse of alcohol, tobacco, tea, coffee and drugs, and the patient's neglect of fresh air and fresh water and his indulgence in sexual excesses.

All this information may seem of slight importance, but if carefully obtained, often has considerable bearing on our final decision as to diagnosis and treatment.

When beginning the interrogation in regard to the clinical symptoms, the customary question, "When did you first feel sick?" should be supplanted by, "When did you last feel perfectly well?" It is surprising how long the latter antedates the former, remembering that tuberculosis so frequently has an insidious onset, and it is practically impossible in most cases for the patient to fix the exact time of the commencement of his illness. As the earliest symptoms are oftenest constitutional ones and not referred to the lungs at all, they will be considered first:

1. The loss of weight may be trifling, possibly not over five pounds. Persistent, if slight loss in an indivdual not now nor recently acutely ill, means chronic disease of some sort. Much depends on how closely a patient looks after himself in the amount of weight he will lose before seeking medical advice. It is well to bear in mind that the commonest cause for this symptom in young adults is incipient phthisis.

2. Indefinite, apparently causeless, deficient muscle tone is the earliest and most constant of the clinical symptoms of early pulmonary tuberculosis. The patient complains that a night's sleep does not seem to bring rest and renewed strength as formerly; and that he tires more easily in the afternoon and may feel exhausted by night. Persistent general weakness in early adult life, in the absence of any easily assignable cause, should immediately cause suspicion of tuberculosis, followed by minute interrogation as to his pulmonary history.

3. Loss of nervous energy includes a number of neurasthenic symptoms, which must be carefully investigated with the view of assigning pulmonary tuberculosis as the probable cause. There is often a marked change in temperament and frequently signs of a nervous system "nagged" by toxemia; the patient becomes irritable and easily upset by little things.

4. Loss of appetite, particularly for breakfast, is a very con-

stant symptom in the early diagnosis of pulmonary tuberculosis. At first there is the indifference to the appeal that food makes to the normal person; later there may be actual aversion to nourishment, especially to the fats and meats of all kinds. Associated with this anorexia, we often obtain a history of stomach trouble, most commonly belching of gas, indigestion, and indefinite gastric distress.

5. Nothing will give the physician more information as to the diagnosis, prognosis and treatment than a careful study of the patient's temperature and pulse. These observations should be carefully taken, and at regular intervals by some reliable person, other than the patient whenever possible. In a true early case of tuberculosis, the fever is slight, but fairly constant, not more than 100° F., somewhat higher in the late afternoon than in the morning. The typical subnormal temperature in the early part of the day, with the sharp afternoon rise, is never seen in early clinical pulmonary tuberculosis. In no other disease is a relatively slight variation of temperature so important. Combined with a slight loss of weight and strength and other suspicious constitutional disturbances, an afternoon fever of 99.2° or 99.4°, with an increased pulse rate, may be considered almost pathognomonic of a tuberculous infection and justifies a positive diagnosis whether or not definite signs are found in the lungs. The pulse rate is nearly always at 80 or over, even when at rest; it may quickly rise to 90 or 100 and more, on ordinary exertion, indicating the reaction of the circulatory system to the tuberculous toxins. With this increased pulse rate, an allied manifestation is low systolic blood pressure, disturbance of the diastolic pressure being less common.

6. Pallor does not always mean anemia. The hemoglobin should be taken in every case and, if found to be 70 per cent or lower, is of diagnostic importance. Secondary anemia frequently occurs in young women with incipient phthisis and is often incorrectly called chlorosis.

7. A common disturbance of the vasomotor system in this disease is the great tendency to flush and perspire on slight or no provocation. Chilly sensations of the hands or feet are frequently met with in the early stages of tuberculosis. Somewhat more commonly than in the healthy, may be noted venous network on the chest.

8. One often notices in a new patient some slight "off-color" quality of the voice, or else close questioning, as to whether his voice is not slightly "roughened" since he has not been feeling well, compared to several months previously, may elicit an affirmative answer. It is often difficult to say whether voice changes are due to the concomitant general weakness, to the unconscious sparing of a weak lung, to the catarrhal changes in the upper respiratory tract, or, as proven in about twenty to twenty-five per cent of the cases, to early tuberculous involvement of the larynx.

9. Menstrual irregularities are common, but of little diagnos-

tic value, except as the existence of such directs our attention to the possibility that tuberculosis is the cause. Premenstrual rise in temperature is very significant, when present.

10. Disturbances of the bowel are exceedingly common. In the habitually constipated, this may be accentuated so as to amount in severity to almost functional paresis of the intestines. In those of regular habits, there is often diarrhea at the clinical onset of early pulmonary tuberculosis, although this looseness of the bowel is not necessarily tuberculosis of the intestine.

Among the group of symptoms of early pulmonary tuberculosis referable to the lungs may be mentioned:

1. Cough is usually present in some form or other, even if it be merely a slight hack or a persistent clearing of the throat. Any cough which lasts more than four weeks requires a careful investigation and should be considered as strongly suggestive of tuberculosis. The classical cough in early phthisis occurs always in the morning, often at night, is recurring, mildly paroxysmal, and out of all proportion to the pulmonary involvement or the amount of sputum raised.

2. Positive evidence of pulmonary disease of the strongest kind is furnished when expectoration is present. No credence should be placed in the patient's opinion that his sputum comes from his nose or throat. When no sputum can be obtained, syrup of hydriodic acid in teaspoonful doses, or potassium iodide in ten grain doses after meals, for a few days, will often loosen the process, so that enough may be obtained for examination. We are warned by some observers that this procedure is but rarely justifiable and may do positive harm. Sputum should always be examined even if macroscopically it appears to consist of clear mucus or pure saliva. Aside from the presence of tubercle bacilli, there is nothing particularly characteristic of the sputum of pulmonary tuberculosis. If small, caseous particles exist, however, they are much more likely to contain bacilli. The physician should bear in mind that negative sputum examinations, even if repeated, do not rule out tuberculosis. If the sputum is positive, the case is not incipient, as the lung process has advanced to the stage of tissue destruction.

The Ziehl—Nellson method of staining tubercle bacilli, the one commonly employed, is the most reliable of any yet offered. No method can replace careful, painstaking search with the mechanical stage of well stained slides for the tubercle bacilli. The antiformin method of concentrating the bacilli has been extensively used, but seems recently to have been superceded by the simpler saturated salt solution method. These chemicals simply dissolve the mucous and the sediment or the scum is then collected and examined in the usual manner.

3. Chest pains of obscure origin are very common in all stages of pulmonary tuberculosis. No significance can be attached to these

chest pains unless they are so localized as to suggest active pleurisy or old adhesions of the pleura.

4 Hemoptysis, occurring in early or middle life, is to be looked upon as strong presumptive evidence of pulmonary tuberculosis, unless it can be proved beyond a reasonable doubt to be due to some other well-defined cause, such as chronic endocarditis with poor compensation, and the various obstructive and ulcerative conditions of the upper respiratory and alimentary tracts, or traumatism. This symptom is unique in that its appearance will sufficiently frighten the average patient to drive him to consult his physician. Important as it is when present, it may not occur at all, or not until very late in the disease. A patient cannot be too carefully questioned as to its presence at any time in his pulmonary history. A hemorrhage, introduced or accompanied by a cough, amounting to half an ounce of blood, is almost invariably due to tuberculosis of the lungs.

5. Dyspnea in early clinical pulmonary tuberculosis is very common and is entirely out of proportion to the amount of lung involvement. Much depends on the manner of history taking in eliciting the presence of this symptom. It is well to ask, in an indirect manner, whether the patient tires easily, whether there is palpitation of the heart on slight exertion, and whether there is distinct shortness of breath now, as compared with six months ago. It is probably an expression of the general toxemia of the disease giving rise, along with the dyspnea, to increased frequency of the pulse rate and low blood pressure.

The physical examination is without doubt of relatively little value in early pulmonary diagnosis. Not underrating the importance of physical signs, two points must be emphasized: first, that physical signs may be misleading even to the ablest clinician, hence no patient should be declared actively tuberculous on the presence of physical signs alone, and, secondly, that no definite physical signs may be demonstrable, although there is quite definite early trouble in the lung. Our endeavor nowadays is to diagnose the presence of this disease at a stage in which no breaking down has occurred. Early changes are difficult to detect except by specialists whose field is limited to chest affections. The general practitioner is the one whom nearly all patients first consult. He can hope for success in the diagnosis of tuberculosis only by thorough and painstaking study of the individual case. He must recognize pulmonary tuberculosis when it manifests itself by loss of weight or strength, or a pulse of 90, or an elevated afternoon temperature, or blood-spitting, or pleurisy, or cough. Any combination of these symptoms, which cannot be explained by other causes, even in the absence of definite physical signs, should be considered sufficient proof of active tuberculous infection.

Many laboratory methods have been advanced in recent years to aid the physician in the diagnosis of tuberculosis, but, outside of

the routine sputum examination, none of them seem practicable for general use, where special laboratory facilities are not provided.

Likewise, tuberculin and the x-ray are means which, while frequently very helpful, are at the same time, so susceptible of misinterpretation that it is doubtful whether their general use is advisable. The general practitioner will not find tuberculin an agent of much value except in the diagnosis of tuberculosis in young children; even here a positive reaction by no means necessarily signifies that tuberculosis is the cause of the symptoms. In practically no case should a diagnosis be based upon the result of a tuberculin test alone without considerable other confirmatory evidence of an active tuberculosis. The same applies to radiographic plates of the chest for, by this means alone, it is rarely possible to differentiate an old healed process from a clinical pulmonary tuberculosis.

In a considerable number of instances, where tuberculosis is suspected, the patient should be required to remain under observation for some time, before a definite opinion one way or the other can be given. It is necessary that physicians perfect themselves in every way possible to make an early diagnosis. In our zeal to find the early case, we should not, however, make a positive diagnosis of clinical tuberculosis without sufficient evidence.

As so clearly stated by Shalet, the point for special emphasis is: "any patient presenting the characteristic clinical symptoms of pulmonary tuberculosis is tuberculous, and should be told so and treated as such, regardless of the meagreness of physical signs in the lungs and the absence of tubercle bacilli from the sputum."

Discussion on the papers of Drs. Scarborough and Peck.

J. W. Kime, Fort Dodge: It is altogether too true, as the doctor has said, that most cases of tuberculosis in Iowa have passed the incipient stages before a diagnosis is made. I believe that in the majority of these cases this error is not due to lack of information or due to ignorance; I believe that in more cases it is due to carelessness, to slipshod methods of examination, passing over symptoms that seem insignificant, and which in other disease would be insignificant, but in this are all-important; for it is at this time, and this time only, that there is hope for recovery in nearly all these cases.

Time will permit of discussion of but a single point, and that I consider the problem in tuberculosis, namely, the advanced consumptive. We have begun at the wrong end entirely to fight tuberculosis in Iowa, and we are getting nowhere. There isn't any use in talking about a lessened mortality in Iowa from this disease, because no such lessening exists. Just because there were a few cases less died in this state in 1913 than there were in 1912 does not by any manner of means prove that tuberculosis is on its last legs. We see this statement sometimes in the newspapers, but that is the only place in which it is upon its last legs. There is no use at all in our talking about stamping out tuberculosis, or thinking that we are getting anywhere in our combat against this disease, so long as the advanced consumptive is at large, is scattering his disease about him, is infecting nearly every member of his household. Frequently Dr. Scarborough sees, and I see, and you all see, cases of tuberculosis of this kind. They go to the institutions and are cared for until they reach the most dangerous stage of the disease. The last month or six weeks of their lives they are taken home, are in close contact with their families, and in a little while another and another and another of that family succumbs

to the disease, and they continue in the same manner. They go to Oakdale or some other institution for a while, when tuberculosis is not dangerous in them, but just before they die, in order that they may infect others of the household and in the community, they return home. Persons who are dangerous to others from insanity, where the sickness is in the brain, we shut up, because once in a while they do injure somebody else; they may kill somebody else. But the advanced consumptive, who is killing dozens, scores, where the man sick in the brain is killing one, we let run at large and infect and kill hundreds of other persons. I say not until we deal with the problem of advanced tuberculosis in a sane and sensible manner, restraining these persons kindly, because they are dangerous, because they are killing other persons, will the time come when we may begin to even think that we are going to get anywhere in our combat against tuberculosis.

(Upon motion of Dr. Wm. Jepson the courtesy of the floor was extended to visitors from other states.)

F. J. Murphy, Sioux City: First of all I want to call attention to a condition that I have met with in practice recently, and that is cases of tubercular meningitis developing in young children where a visitor in the house suffering with tuberculosis had come into the family.

Speaking of the early diagnosis of tuberculosis, don't you think that the early diagnosis is neglected because a great many men are carried away by these refined methods. I find men using the Calmette and Von Pirquet and other forms of tuberculin tests in their diagnosis when they really don't know how to use them. In the first case, in the use of the tuberculin method, we should follow the local changes in the lung as well as the general reaction, and I believe where there are suspicious signs in the lung, an exaggeration of those signs is of more importance than the constitutional reaction. I think medical men, like their patients, are full of prejudice, and are carried off by every novelty that comes along, instead of sticking to the old and authentic. We should use what is good in the new, instead of at once accepting it as the last and best thing. In the early diagnosis of tuberculosis the history is very important. I think most cases have a family history, if the history is run down. Secondly, the changes on physical examination. The ear should be cultivated to recognize the finer auscultatory changes and the limitations of motion in the lung itself. Further than that, I believe, as I say, we are so taken up with this finer technic—most men are so in love with those refinements that they are carried away by some of those precise methods, that they neglect the family history, history or loss of weight, (these are old things, but they are just as good as ever), the short breathing on exertion, and the feeling of weakness; in other words, the patient finds it necessary to exercise more will to bring about the same results in effort. I think these are the points that are just as applicable today as ever.

J. L. Augustine, Ladora: I think the ordinary practitioner is perhaps incompetent enough in the diagnosis of tuberculosis, and that he should take every means possible to better equip himself to make a diagnosis; but the one thing I consider very important in making an early diagnosis is to have the oportunity. Unless something occurs so that the patient comes to the practitioner earlier than he ordinarly comes, the diagnosis will necessarily have to be made later. It is a very rare thing that a patient with tuberculosis comes early for examination; it is usually months, and even longer than that, before the patient is awake to the sense that he is ill at all. It has been only very recently that I had this thing forcibly impressed on myself. A patient recently came to me in whom I was able to make the proper diagnosis. The patient and the family remembered distinctly that for at least six months the patient had been failing; he had become exhausted easier, and had noticed there was something wrong. Unless we can get at these patients earlier, we can't make an early diagnosis.

W. E. Scott, Adel: It seems to me that we should begin with the babies in this matter and endeavor to raise a crop of immune children. It has been stated that something like 94 per cent of children at the age of fourteen are infected with tuberculosis. This matter of diagnosis of tuberculosis seems to be more a matter of whether tuberculosis is active or latent; or rather, it is simply a matter of whether tuberculosis is active in the patient. It seems to me that physicians should ever bear in mind that every individual is possibly tubercular, and that by continuing to educate his patients and teach them the proper kind of living, and by continuing to build up the system and improve in all cases of disease, he will

do very much toward preventing the development of active tuberculosis and having in the community advanced tubercular patients. It is my observation that we don't have anywhere near as many advanced tubercular patients as we used to have; at least that is true in our community; and I believe it is due to the fact that physicians are bearing in mind the fact that tuberculosis may exist, and it may become active at any time, and that in all their treatment they shoud endeavor to prevent the disease from becoming active.

Now, this matter of resistance of course may depend to a certain extent upon the dose of tubercular poison that the child has received in early life and the effect that it has had upon his system, and whether he has acquired a certain degree of immunity. It occurs to me that when children are permitted at that stage of life when they crawl and creep, to crawl and creep upon the floor upon which we walk, upon which we deposit fiflth from the street and every other source, and to put that material into their mouths, as they all do, they must necessarily receive tubercular germs, as tubercular germs are omnipresent. It seems to me that the wise thing to do in the way of preventiion would be to not permit children to creep upon the floor upon which we walk. There should be a separate room or corner of the room where the floor is a foot higher than the rest of the floor, and is not stepped upon by the feet of other members of the family, but is kept in a clean, sanitary condition; and that all playthings which children put in their mouths should be so taken care of that infection is not liable to result. Certainly children are more liable to be infected than grown people, because they have not battled with germs previously and acquired any degree of immunity. If we can raise a crop of children that are immune to tuberculosis, perhaps we will begin to solve the problem. At any rate, if it is true that 94 per cent of all children are tuberculous at the age of fourteen, it is then a question of whether the tuberculosis becomes active or not; and if the general practitioner will bear this ever in mind, and treat his cases with this in mind, so as to give good general nutrition and prevent the tuberculosis from becoming active, and continue to teach his patients as to the proper way of living, tuberculosis would become less. It occurs to me that in any event the treatment is practically the same; that all individuals should live just the same as though they were tubercular; that all persons should be taught the correct way; and that the treatment of any case of illness, whether it is going to become tubercular or not, is practically the same so far as hygiene and nutrition is concerned; and that this matter of diagnosis, if you take it early enough and begin to see the patients early (nearly all physicians see their patients early now and as prevention is the idea in the community, with laity as the doctor) is not really so important. We may consider that our patients may be tubercular anyway, and if we teach them how to live so that this tuberculosis will not become active, the matter of diagnosis does not become of such great importance.

Samuel Kline, Sioux City: I maintain that there is only one cause for hemoptysis, and that is pulmonary tuberculosis. By that I do not mean that there are no other causes for hemoptysis; there are; for instance, valvular lesions of the heart and hemorrhagic diseases, such as scurvy, hemophilia, purpura and leukemia. But the cases of hemoptysis which we puzzle over have only one cause, and that is tuberculosis. Now it is very easy to exclude valvular lesions of the heart, as well as hemorrhagic diseases; and after deciding that the hemorrhage did not come from the upper respiratory tract, such as the nasal pharynx, mouth or gums, there is only one cause left.

I have known many cases of hemoptysis in which the patient, being alarmed by the hemorrhage, has consulted a physician, who immediately proceeded to make a thorough examination of the chest, and finding no symptoms, assured the patients that they were in perfect health and presumed that the hemorrhage was of trifling origin; and thus golden opportunities were lost to treat the patients for tuberculosis for months, until more pronounced and unmistakable evidences of pulmonary tuberculosis appeared. We practically never find any visible signs of tubercle bacilli in the sputum in cases of hemoptysis appearing in apparently healthy individuals, and this thorough chest examination is apt to mislead the physician into negative conclusions. Hence I would advise doctors called to cases of pulmonary hemorrhage not to make any examinations of the lungs or sputum, but, if assured that the hemorrhage did come from the lungs, after excluding heart lesions and hemorrhagic diseases, which are always easy, to shut their eyes and pronounce the cases tuberculosis

and so treat them, no matter what the outcome may be. It has been amply proven, especially by Lord, who made a thorough investigation of the subject, that in practically every case of a hemoptysis appearing in an apparently healthy individual, who soon recovers from the bleeding and stays well for the rest of his life, post-mortem examinations show that the bleeding has come from an old healed tubercular area.

Guy P. Reed, Davis City: I was very much impressed with Dr. Kime's remark that we had commenced at the wrong end of the tuberculosis fight. Dr. Scott says we should commence with the children. In my opinion we should go still farther back. The time to commence with tubercular children is to commence with tubercular women. I think we are as far behind as the paper stated. We are behind other states, and behind foreign countries in this line. In my opinion, the thing to do, if we find a woman that is tubercular in the first few months of pregnancy, is to remove the fetus at that time, and if necessary, in order to prevent further conception, we should section the tubes, and thereby commence back at the point where we can do some good. Not only that, but we do this mother some good; we give her a longer life; we give her a chance to get well; and we don't allow diseased children to come into the world and keep on spreading the disease.

D. N. Loose, Maquoketa: I cannot resist the tempation to add a few more words to this long discussion. I believe the solution of the problem is education. The doctor cannot make the early dignosis unless he has the opportunity, and the laity have to be educated to give the opportunity. In my community I know Dr. Kime's campaign of public education has done more good than anything else that doctors could do or have done. I believe the whole solution of the problem is education of the laity; systematic, persistent examination of schools, and education in the field constantly.

A. J. Booker, Des Moines: I hate to prolong the discussion, but because negroes are supposed to be especially susceptible to a disease that runs a specially fatal course, I have become very much interested in this subject. I do not believe that tuberculosis is a race disease, but purely a matter of social conditions and of hygiene. Possibly I have a better opportunity than some of you gentlemen to do educational work. For instance, if I tell the pastor of my church that I want an opportunity to talk to the people upon a subject upon which I feel pent up, he gives it to me. I stand pretty well with Dr. Sumner of the state Board, and I go over there to his office and get an armful of pamphlets and distribute them to the congregation and tell them they must take them home and read them. The great trouble I have is that so many people are coming to my office and asking if they have tuberculosis; and when they have a pain in their chest I have difficulty to convince them that they only have rheumatism. But I want to put the responsibility on them and make them feel that, as some one has suggested here, if they would live always as though they had tuberculosis, they would never have it. So much have I preached fresh air and rest that if some strange person sends for me, I always find the window up, because the one who has recommended me has said that that would be the first thing I would say.

In little children, with an early diagnosis, the disease is very easily handled, if handled properly, because it is easy to feed a child and keep it quiet, especially the very young ones. The mistake that older people make is in trying to exercise to get strength. We all know that less depends upon the doctor than upon rest, fresh air and food, and when the people begin to feel that it depends upon them rather than upon the medicine that they get, they are on the alert for tuberculosis and come to me looking for it. It is true that I have sent come advanced cases down to Oakdale, but those are some negroes that are just coming to town, not those that have been there for a long time.

My mother died from tuberculosis, and they chased her all the way from the Gulf of Mexico out of Arizona and California. More people have been killed in trying to find a suitable climate, I believe, than would have died if somebody had had the temerity to put them in bed and make them stay out of the weather twenty-four hours a day and three hundred and sixty-five days a year, and tell them that not when they begin to feel better are they cured, but that they must watch themselves for months afterwards.

Lewis Schooler, Des Moines: Ii is not to be expected that I could say very much of importance on this subject, so you need not get your expectations too high. Like the temperance question, there are some insur-

mountable obstacles, and the most insurmountable one, to my mind, is the housing of the people. It is the most neglected point in all the sanitary measures that are taken to prevent any of the so-called preventable diseases, and there is a reason for it. This is not Russia. A man's home is his castle, and he can do as he pleases. One gentleman spoke of lowered resistance. The lowered resistance in his family did not begin in the United States; it began back in Norway. All over this country we have the lowered resistance which originated before the forefathers and mothers came from the old country. But that does not lessen it any, and does not increase it very much. We have the very same conditions here, and we can't keep a health officer in every family. You can't keep a policeman in every man's front yard, and if he did, he would shut down his windows in spite of them, and the air wouldn't come in.

I was raised in the jungles of Indiana, where for ignorance and hospitality the people rank very high. They had a horror of night air, not recognizing that there wasn't any other kind of air from a little after sundown until daylight; and they closed everything up, and then every family for a large area around there had one or more cases of tuberculosis. You find that not only among the farm people, but among the people of the cities; not only among the poor, but among the wealthy. Recently there appeared in the Post, I think, an article by a former citizen of our town in which he advocated piling fifteen or twenty men into a room and letting them sleep that way.

Now, as regards the incurables, the Polk County supervisors are disposing of that question pretty well. They have built a little hospital out at the county farm, and they don't take in any but those in the last stages, and they don't keep them very long. It is on the same theory that some people have of giving the old toper all the whiskey he wants and letting him die. They don't take an incipient case, or any but what is ready to die in three or four weeks, and thereby they lessen the cost to the county.

That is one way of disposing of it. But the difficulty of making a house-to-house investigation and determining what the conditions are, in my opinion will never be solved, and that is the root of the whole thing; it is the only place that we can get at it. The persons who believe in living that way don't want to be interefered with. If any of them get tuberculosis, the doctors don't know anything about it. If they go to a doctor, he is going to make them sleep in the open air, regulate their diet, perhaps, and do this, that and the other thing; and they say they won't stand for it, and they don't.

Dr. Peck: There were too many points brought forward to take them all up and answer them. I simply want to say that the neglect in the diagnosis of early tuberculosis depends upon two factors: first, the patients; second, the physician. In a good many cases the first one is more to blame than the other, but it strikes me that opportunity to diagnose tuberculosis presents itself rather more frequently than the practitioners imagines, and that many of these cases have gone unrecognized for years. I saw a case yesterday where a man has infected his wife and five children. I believe he has had tuberculosis for fifteen or twenty years, and the physicians have had many opportunites to diagnose the disease in that length of time.

In speaking of the remarkable number of tuberculous cases we should distinguish between clinical tuberculosis and anatomical tuberculosis. We admit nowadays that practically all cases at autopsy show some scars in the lungs or some healed foci in the foci in the bronchial glands or elsewhere. But the thing that we are especially interested in is, how much is that tuberculous infection bothering the patient, how much is it interfering with his good health? We are not looking for the anatomical tuberculosis; we are looking for the clinical tuberculosis; and we will find it very frequently if we search diligently.

The point made by Dr. Kline in regard to hemoptysis we will all indorse. There are only a few cases of real blood spitting that you can blame on any lesion other than a tuberculous lung, and these should never be passed by lightly. If the hemorrhage recurrs, it is more significant, and is very valuable evidence.

I was glad to hear Dr. Booker, in summing up his treatment, put rest first, because rest is the valuable thing. Rest is three-quarters of all of it, and we ought to appreciate that fact.

Dr. Scarborough: So many facts have been brought forward and so many points touched upon, that, as Dr. Peck said, it is impossible to say

much about any one of them. In fact, this varied and vigorous discussion, in itself, emphasizes the fact that we need in our state a place to go over these things. We should have a department for this subject. If there is anything more important for discussion in Iowa than tuberculosis, I don't know what it is; therefore the matter should have special opportunity. Some of the views expressed today on this floor I can not agree with; in fact, they will lead us into bad ways. We will never get together until we thresh these things out; and we will never stop abusing the subject until we quit disagreeing among ourselves. I don't care to say much about any of the discussions except one, as an example, where it was said that climate and good feeding were the important things in the treatment of tuberculosis. This can be disaproved by studies and investigations that have been made, which show that tuberculosis is not cured any more surely in the west and south than in other parts of the United States; and that good feeding is away down in the list of rational remedies used in treatment. As Dr. Peck has said, rest is the important thing. There is necessity for us to get together, form an organization and find out where we are at to bring our knowledge up to the place where it will be effective.

One other thing that I did not mention in my paper because I did not have time is subsidy. In Iowa we are not getting anywhere with our county work with advanced cases, and the reason is that we are right up against the serious matter of expense. We put our work in the hands of county authorities, where the dollar is too close to the eye. They are not going to stand for the whole expense of all these cases. The present arrangement is for the county to be charged up with all the expense of Oakdale patients. It looks very much as if they are going into the next legislature and get a provision allowing them to decide when these cases are to come to us. It is all right to have a place for advanced cases, and there should be one under county control in each of a large number of the more populous counties, but if we allow the county authorities to decide when a case shall come to Oakdale, few curable cases will come there at all; the very large majority will be incurable, and our efficiency will be wiped out. Oakdale is the place for the doctor to send his favorable patients, and if physicians want that place to run for curable cases they must watch that this thing is not done. They should also watch to see that the institution is properly treated financially, and that accommodations are provided there for the cases they want to send. We would like to have all of you come down and look the place over and get acquainted. A fuller knowledge of the work done there would save a lot of misunderstandings.

Subsidy, as I said before, will help a great deal. If we divide the expense and have the county pay half with the state paying the rest, of the cost at Oakdale, then the burden will be more evenly distributed. Also the state should pay the county for every incurable case that is cared for in the county, so that the state can depend upon it that every county will build a suitable place—not a house on the hill that has nothing but a bed in it, but a place where tuberculosis cases can go and be comfortable and stay. We will then get more and better county institutions, because the county won't be charged up with all the expense, and that will help a great deal. These things will not come except by organizations. The legislature is not going to act until there is some showing that it is necessary. We are getting nowhere because we are not doing things in the right way, and we are not educating our people to know the need.

SUPPURATIONS OF THE LABYRINTH—REPORT OF SIX CASES*

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History: The development and study of labyrinthine suppuration from the earliest experiments to the scientific studies of the present day, is a most interesting work. The studies of Floureus in 1824 to 1828 and followed later by the experiments of Ewald were the foundations upon which our present day literature is founded. Later several noted scientists, among whom are the names of Jansen, Hinsberg, and Richards added greatly to the subject. Among the more recent writers, the name of Robert Barany of Vienna perhaps stands foremost among the investigators of labyrinthine suppurations. He has conducted many experiments and has given much valuable time to the study of the labyrinth. Much credit is due Phillip D. Kerrison of New York for his many valuable contributions to the literature on this subject.

Etiology: As is well known, the etiology of suppurative labyrinthitis is very rarely primary. It is usually secondary to diseased conditions of the middle ear, especially otitis media suppurative which so frequently follows the acute exanthematous fevers as measles, mumps and scarlet fever, particularly the latter. Suppurative labyrinth may become infected systemically through the blood thrombus in the petrosal sinus of the temporal bone. Only occasionally are suppurative processes set up in the labyrinth as a result of acute otitic infections, more commonly they occur as a sequence of long standing middle ear suppuration. They occur very frequently as an acute exacerbation of a chronic process of tympanic suppuration.

The most common channel of infection from the middle ear to the labyrinth is by the erosion of the external semicircular canal; next through the foramen ovale, thence by the posterior canal. The labyrinth may become infected systematically through the blood vessels and the lymphatics. Shambaugh[1] has worked out the circulation of a guinea pig and has demonstrated that there is quite a definite anastomosis of the blood vessels of the labyrinth and those of the middle ear. It must also be remembered that toxins of a systemic disease may become localized in the labyrinth and thus a localized labyrinthitis becomes apparent, which soon by lowering the vitality of the structure, makes it a ready playground for any pyogenic bacteria which are in the circulation at this time.

Pathology: The pathology of suppurative labyrinthitis following an acute otitic trouble consists in finding the inflammatory products in the endolymph and these may be localized or diffused throughout the vestibule and all the canals. The fibrin becomes

*Read before the Marshall County Medical Society, Feb. 17, 1914.

organized, a vascularized connective tissue is formed around the entrance of the infection. If of a very virulent infection the process becomes quite extensive, granulations may or may not be formed in the acute type. In the chronic form or where a labyrinth infection has been set up following a long history of otitic trouble, a great many small granulations are found. This vascularized connective tissue may in time be transformed into a hard bony substance by the deposite of calcium salts. Much of the labyrinthine wall may become absorbed and broken down. Microscopically, round cell infiltration is found in the serous membranes.

Symptoms: Usually the initial symptoms to appear in acute suppurative labyrinthitis are those occurring as a result of irritation of the end filaments of the vestibular and cochlear nerves. The former being attacked first, patient becomes dizzy and vertigo appears along with disturbances in equilibrium. If the patient is not already confined to bed, this forces him to go. Examination of the eyes will reveal a rotary nystagmus most marked when eyes are looking toward the sound side. The patient complains of the peculiar vertigo in that all the objects tend to rotate before his eyes. Among the cases studied, nausea and vomiting was nearly an invariable symptom and usually appeared early along with the vertigo and disturbances of equilibrium and subsiding in 2 to 3 days.

Complications: The complications most liable to occur in suppurative labyrinthitis are, meningitis, cerebellar abscess, and septic thrombus of the jugular vein.

Prognosis: It is difficult to state the prognosis of a labyrinthine suppuration. The acute form may subside gradually and healing take place, however, this may only be temporary and sooner or later the condition returns. Every labyrinthine suppuration should be regarded as a dangerous process for the elimination of which we should use every possible means. We are not exactly able to distinguish between the favorable and the unfavorable forms. The prognosis is unfavorable in the chronic forms, perforation of the promontory wall; pressure of cholesteatoma extending into the interior of a semicircular canal.

Politzer[8] holds that the prognosis is very unfavorable in an established perforation of the promontory wall, which, with a simultaneous deafness, must be looked upon as a sure sign of a diffuse labyrinthine suppuration and in which, as already mentioned, the destructive process not infrequently extends to the peripheral part of the internal meatus and to the auditory nerve.

An infection of the labyrinth of tubercular or exanthematous origin is generally held to be more destructive than due to other pyogenic causes.

Treatment: There are many different views now held regarding the treatment of labyrinthine suppuration. The treatment should

only be considered after a most careful study of the existing conditions which are present in each individual case.

The purpose of the labyrinth operation according to Ballenger[9] are

1—To prevent the extension of the purulent infection to the meninges and brain, and to check and cure an incipient meningitis having its origin in the labyrinth.

2—The second purpose is to cure an offensive purulent otorrhea which is perpetuated by a labyrinth fistula, remaining after the destruction of the labyrinth by a diffused suppurative labyrinthitis.

3—The third purpose is to relieve the patient of the distressing symptoms which occasionally persist after the cochlear nervous apparatus is destroyed by a suppurative process, while the vestibular nervous apparatus is but partially destroyed and gives rise to distressing conditions.

(The following cases were studied when the writer was a member of the Staff of the University Hospital, Iowa. Dr. L. W. Dean, Surgeon in charge.)

CASE REPORTS.

Case No. 1. Miss L.—School girl, age 17—contracted scarlet fever nine years ago which was followed by a constant discharge from each ear. Three months ago patient developed measles following which there was a very purulent discharge from the right ear accompanied by dizziness, nausea and vomiting. Examination of the right ear revealed the canal filled with a fetid discharge, cultures of which showed Staph. Albus. Rinne negative, drum-head absent, bearing with Barany's apparatus, loud voice on inch; slight stricture of tube; promontory covered with a red polypoid mucous membrane; caloric negative, blood count normal, fundi normal. The radical mastoid operation was followed by a complete labyrinthectomy. Pus was found under pressure at junction of posterior and horizontal semicircular canals; cochlea wall necrotic; the first and second turns of cochlea were opened and drained. A slight rotary nystagmus occurred for two weeks, otherwise an uneventful recovery followed.

Case No. 2. Mr. F.—farmer, age 33—came to the hospital complaining of a discharge from the left ear for the last fifteen years accompanied by frequent dizzy spells, nausea and vomiting. Last attack came on three weeks ago. During each attack patient is obliged to go to bed for the relief of the symptoms. Examination of the left ear revealed drum absent. Rinne negative. With alarm apparatus unable to hear spoken voice. Spontaneous nystagmus to the right; caloric negative, Rhomberg present. With head erect patient tended to fall to the left or diseased side, with head to the left tended to fall backwards. Fundi normal, culture showed pneumococci. A tympano-mastoidectomy was performed revealing much necrosis throughout all the mastoid. The labyrinthectomy followed, a few granulations were found in the external horizontal canal, many old granulations were curetted from the vestibule. The first and second turns of the cochlea were opened and drained. An uneventful recovery followed resulting in a dry tympano-labyrinthine cavity.

Case No. 3. Acute purulent labyrinthitis followed by septic meningitis and death. April 18, Mrs. M.—34 years of age, had suffered from a chronic right middle ear suppuration for the last two years. Family

history negative. Had scarlet fever and mumps as a child. During the last year patient frequently became dizzy, nausea and vomiting set in and she was forced to go to bed. Dizziness becomes more severe at each attack. Examination revealed patient fairly nourished, pupils round and equal, reacting to light and accomodation. Fundi normal. No nystagmus. Right ear showed portion of drum present. Rinne negative. She was able to hear conversational voice at a distance of eight feet. Caloric positive. Cultures showed staph. albus. April 21,—A radical mastoid was performed revealing much necrosis throughout mastoid cells and especially around the attic. Dura and sinus not exposed. April 28,—A plastic was performed which was followed by much vomiting and intense headache. Emesis and headaches continued. Urine negative. May 18—A spontaneous rotary nystagmus to the left appears. Fundi normal. Blood count shows whites 12,800 and polymorphonuclears 88 per cent. Slight rigidity of neck muscles. May 12—A complete labyrinthectomy revealed vestibule filled with pus. Following day, patient drowsy and the right eye deviated outward on convergance. Cultures from spinal fluid and wound both show streptococcus. Daily increase in polys, at present 92 per cent. May 14—Facial paralysis on right and a typical Babinski of both feet. Three days later patient died. No autopsy permitted.

Case No. 4. Miss B.—Clerk, age 23—came complaining of a discharge from the left ear which followed an attack of scarlet fever at three years of age. Right ear normal. No history of nausea and vomiting. Examination of left ear showed that only a remnant of drum remained. Rinne negative, caloric negative, no nystagmus present. Cultures proved to be staph. albus and pneumococcus. Blood count showed a slight increase in polys. A radical mastoid was performed revealing old granulations in tympanic cavity, no remnant of incus or stapes to be found. Pus was exuding through both round and oval windows. The complete labyrinthectomy was done and proper drainage established. A marked rotary nystagmus to the right followed for ten days. A dry tmpano-labyrinthian cavity followed.

Case No. 5. Mr. S.—farmer, age 18, was admitted to the clinic, complaining of a discharging sinus behind the right ear for the last ten years. During this period patient has had frequent dizzy spells followed by vomiting. One week ago right mastoid became very tender to touch. Examination of right ear revealed a red swollen area over mastoid with a discharging sinus at tip, no nystagmus present. Rinne negative, unable to hear conversational voice. Large perforation through which was discharging fetid pus, culture of which proved to be Staph. Albus. Caloric negative. Fundi normal, blood count normal. The radical mastoid combined with the larbyrinthectomy was performed. The sinus was found leading into the horizontal semi-circular canal. All the canals were found involved. Likewise the vestibule and cochlea, all of which was curetted and proper drainage established. Following the operation there was a marked rotary nystagmus, increased on looking to the left. Patient made a nice recovery.

Case No. 6. Mr. F.—farmer, age 35, had suffered from a chronic suppuration from his left ear since he was thirteen years of age. Three weeks ago patient developed a severe cold which was followed by an increased purulent discharge with very bad odor, all of which confined him to bed. On attempting to raise to a sitting posture, he would become very dizzy and nauseated, vomiting would follow. This condition lasted one week. Patient was able to be up and around, though somewhat dizzy all the time. Functional tests showed absolute deafness in left ear, right

ear normal. Fistula test and air condensation gives a slight nystagmus to opposite side. Rinne negative. Blood count normal. Cultures showed pneumococci. The radical mastoid operation was first done, this was followed by opening the horizontal semicircular canal and vestibule from which many old granulations were removed. The first and second turns of the cochlea were opened and curetted. An uneventful recovery followed.

In a certain few cases the nystagmus may appear directed to the diseased side first, due to irritation and then in three or four days, it is directed to the sound side. The nystagmus to the sound side is explained upon the fact that when the labyrinth has been destroyed on one side, there is an over stimulation of Deiter's nucleus on the opposite side and hence a nystagmus to the sound side follows.

Usually the first symptoms to appear are dizziness, subjective noises and spontaneous nystagmus and these in turn are the first to go, while the disturbance of equilibrium, if present, will continue for a variable time.

The cases studied here show that the temperature rise was somewhat gradual, only one case where it rose at all suddenly.

One case showed facial paralysis early in the labyrinthine involvement. Kopetzky[2] holds that in labyrinthine infection the onset is found to be marked with a distinct rise in temperature and sudden appearance of facial paralysis. On the contrary Dench[3] holds that facial paralysis does not occur early or is a common sign of purulent labyrinthitis. Facial paralysis usually occurs in cases of long standing necrosis. As to the frequency of facial nerve involvement many different reports are given. Ballenger[4] has found the facial involved is labyrinthine suppurations in 55 per cent of the cases under his observation, while the report of Gerber[5] and Bezold varies from 77 per cent to 83 per cent. Blake[6] states that the most vulnerable points of the facial nerve being the region above the oval window and the superior portion of the posterior tympanic wall.

There is usually some disturbances in hearing in every labyrinthine case. A gradual progressive loss of hearing developing under close observation in a comparatively short time is characteristic of inner ear involvement. In diffuse infective labyrinthitis of long standing there is generally found a total loss of hearing.

In the acute infective labyrinthitis, after three or four days, the acute symptoms disappear but the nystagmus remains most marked to the sound side. There is now a condition known as the latent or chronic form of infective labyrinthitis. The nystagmus continues to the sound side for about three weeks and then becomes gradually weaker and finally disappears altogether. Headache is a common accompaniment of purulent labyrinthitis. The character is that of a dull heavy pain referred to the temporal region on the side involved.

Tinnitus aurium occurs rarely in the course of a labyrinthine suppuration and only an occasional record is found among the many cases published.

"Disturbances of equilibrium are fairly constant symptoms in the acute and subacute forms. In the chronic forms they are not so constant." Such disturbances include giddiness, standing or walking, with closed or open eyes and vertigo when even in a position of rest. The subjective vertigo complained of by the patient is a sensation of falling.

Diagnosis: The prospective diagnosis of suppurative labyrinthiitis is at times difficult, even where the typical symptoms such as vertigo, deafness, nystagmus, nausea, vomiting and headache are present. Impaired hearing, developing while the case is under observation and later having Webber's test localized in the sound ear, is generally evidence of invasion of the labyrinth. Accompanying this, the bone conduction is much impaired, and the range of audition greatly reduced; the upper tone limit lowered and the lower tone limit elevated. Barany[7] states that disturbance of equilibrium is characteristic only of the acute stage of labyrinthine diseases, and that it regularly disappears as the lesion advances either toward resolution or destruction of the vestibular structures. von Stein[7] however, holds that disturbances of equilibrium are present in all stages of suppurative labyrinthitis. When such disturbances of equilibrium are found in chronic suppurative labyrinthitis they are probably due to the over stimulation of the sound labyrinth. The caloric tests are negative. Rotary nystagmus to opposite side and the direction in which the patient would fall would always be influenced by the position of the head.

In a differential diagnosis, cerebellar abscess must be excluded. The nystagmus in a case of cerebellar abscess increases from day to day while in suppurative labyrinthitis, it becomes less and less marked and may finally disappear, owing to the extension of the suppurative process. In cerebellar abscess the quick component of the nystagmus is directed to the sound side later it is directed to the diseased side. In labyrinthine suppuration the quick component may be directed for the first two or three days to the diseased side and then it is directed to the sound side. In cerebellar abscess the caloric tests are positive; no deafness present. Patient always tends to fall to the diseased side irrespective of the position of the head. Choked disc is present whereas it seldom appears in the labyrinthine suppuration. In some few cases of localized purulent meningitis the differential diagnosis may be difficult, a sudden rise in temperature, marked losses, vomiting, rigidity of neck muscles and in finding the diplococcus intracellularis meningitis or pneumococcus in the spinal fluid points to meningeal infection.

The indications which are most generally accepted at the present time for opening the labyrinth are:—

1—With the labyrinthine symptoms, complete deafness and non-irritability of the vestibular nerve of a chronic process or an acute exacerbation of a chronic process indicate immediate opening of the labyrinth.

2—Necrosis of the labyrinth as induced by cholestaetomatous pieces discharging from the wound and if associated with facial paralysis indicate opening of labyrinth and removal of all necrotic tissue.

3—Following a radical mastoid operation, at the first sign of meningeal irritation open and drain labyrinth.

4—According to Jansen any symptoms of cerebral complication makes a positive indication to open the labyrinth at once.

Generally speaking there is no indication to open the labyrinth in an acute labyrinthine suppuration. However, the case must be kept under most careful observation and at the first sign of meningeal irritation the complete labyrinth operation should be performed. In the acute type it is better to keep the patient at absolute rest, by that I mean, no movement whatever of the head or body. Ordinarily it will not require much will power to keep such a case at rest, for the patient will remain very quiet to avoid the most distressing symptoms that arise on movement. In certain cases, where with a marked onset and pronounced symptoms of the process becoming diffuse, one is obliged to operate at once. The latent stage of a labyrinthine suppuration is the period in which it can be operated upon with the best prognosis. Kerrison[10] states that vomiting, headache and elevation of temperature are distinctly characteristic of vestibular irritation and are not necessarily indicative of meningeal disease and where these are not excessive or too prolonged, surgical intervention should be delayed.

In cases of chronic middle-ear suppuration where there has been evidences of past suppurative labyrinthitis, it is best and safer to open and drain the labyrinth at the same time performing the radical mastoid operation.

According to such men as Hinsberg, Jensen, Neumann, Barany and Richards it is most essential that the vestibule should always be opened and drained in the chronic labyrinthine suppuration because:—

1—The operation secures free drainage from the vestibule which is always involved in suppurative labyrinthitis and

2—Enables operator to destroy the membranous structure of the vestibular apparatus which is a main point in controlling permanently vestibular symptoms.

The route posterior to the facial canal from the manipulative standpoint appears to be the most convenient, because of least danger to the important structures and allows the operator to fully expose the limits of the disease.

Much discussion has arisen during the past as to the nature and extent of the operation. Neumann[11] advocates the complete exposure of the cochlear and vestibular apparatus while Alexander[4] and others believe in only partial exposure. Operating during the latent stage of the disease we are inclined to hold that a complete labyrinth operation should be performed.

It will be found safer for the patients and the results are better. Ruttin[12] has performed one hundred complete labyrinth operations with one death resulting from the operation.

The primary step in every labyrinth operation is the complete exposure of the tympanic cavity and the horizontal semicircular canal by the radical mastoid operation. The internal wall of the tympanic cavity and the horizontal canal should be carefully examined for any fistulous tracks leading into the labyrinth. Should a fistulous opening be found in any of the canals and not localized they should be thoroughly opened and removal of all granulation tissue and necrotic bone. In many cases it will be necessary to chisel away the canals to their base, thus opening the vestibule above and behind. Where fistulea are found the labyrinth is better exposed behind the facial ridge. The posterior crus of the horizontal canal is opened and the anterior crus is chiseled away to the labyrinth. Then the bone lying below the oval window and above the round window is removed, thus exposing the vestibule and small portion of the cochlea. The opening is now enlarged so as to freely drain the first and second turns of the cochlea. The posterior cranial fossa is not opened as a routine measure in the labyrinth operation.

The method of Hinsberg[13], Bourguet[9], and Batey[9] are very much similar. They all reach the vestibule from in front of the facial ridge and then open and drain the promontory, etc.

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TONSILS AND ADENOIDS*

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When your honorable secretary asked me to prepare a paper for this meeting, I selected this subject for the purpose of bringing it before the society. I do not claim any superior knowledge on the subject, nor any peculiar capacity for treating those cases, but feel that the subject is a very much neglected one, and one that should receive more attention from the general practitioner, and for that reason I wish to provoke discussion of the subject.

In the larger cities where medical inspection of school children is enforced, a showing that from twenty to thirty per cent of all children examined have tonsils and adenoids, should be sufficient to make us seriously consider the subject. Tonsils and adenoids are very closely associated, as ninety-five per cent of all children having tonsils have adenoids. In fact they are so closely associated and so generally found together, that adenoids are often spoken of as a pharyngeal tonsil. Sex plays no part, as both are equally affected. Tonsils and adenoids are very easily recognized. In fact few cases should be overlooked. Symptomatology of adenoids in infancy differs considerably from that found in older children. Infants are often afflicted with snuffles—are unable to nurse, have difficulty in swallowing and often have ear complications. Snuffles in infants is almost diagnostic of adenoids. In such cases the adenoids should be removed, but not the tonsils, unless the child is having rheumatism or some serious tonsil infection. It is chiefly a disease of childhood and adolescence, most common up to the age of fifteen, and not often found after the age of thirty. Anything that tends to lower the child's vitality, making him more susceptible to the atmospheric changes, acts as an indirect cause. The lymphoid tissue in children is especially susceptible to changes due to repeated colds increasing the vascularity of the lymphoid tissue, causing constant congestion and an over-growth of lymphoid tissue resulting therefrom.

We have the obstruction to nasal respiration necessitating mouth breathing with a muffled voice and nasal twang. Patients are unable to talk plain; and cannot give the sound of the consonants. They have a peculiar expressionless countenance, open mouth, noisy respiration; and owing to difficult breathing, they sleep poorly; are restless and toss about, dream frequently, and nocturnal enuresis is common. They have the appearance of having a cold all the time. The parents will tell you the child seems to have a cold in the head and takes cold easily, and seems troubled with catarrh. You can generally make your diagnosis in such cases without see-

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ing the patient. The facial expression is usually quite pronounced. The naso-pharyngeal obstruction causes an abnormal development of the superior maxillary bone, causing the high arch palate and the prominent, and often, over-hanging front teeth. The constant difficult breathing tends to cause the child to become round-shouldered. Owing to the difficulty of breathing the child is supplied with less than a normal amount of oxygen—his general health is below par—he does poor work in school—has no morning appetite and is constantly irritable.

Owing to this early obstruction the naso-pharyngeal cavities never develop and mature to a normal condition. Sir Morrel Mackenzie years ago experimented on young rabbits by closing the naso-pharyngeal space and keeping it closed during the growth and development of the rabbits. He found practically no growth or development in the space so obstructed. The same thing occurs with adenoids. What do we have as a result? Authors tell us that 95 per cent of the naso-pharyngeal cases develop ear complications at some time. For this reason early recognition and removal is very important before permanent injury to the hearing has been produced.

Adenoids often cause catrrhal laryngitis and spasmodic croup and are the chief cause of otitis media. Difficult hearing is often the first thing noticed by the parent. If the adenoid growth is high up in the pharynx a comparatively small amount of adenoid tissue may cause obstruction to the eustachian tube and cause ear complications, while larger growths lower down in the pharynx may not cause so much difficulty.

In speaking of the tonsils, a subject so important and on which so much could be said, I shall limit myself to a few of the important points. The size of the tonsil is not a very definite guide as to the amount of pathology contained in, and results produced by it. While large tonsils should be removed, they are not necessarily the ones to be most severely condemned; but rather the submerged gland, often barely visible, between the pillars, being covered by adhesions from pillars due to previous atacks of tonsilitis causing an increase of fibrous tissue with corresponding decrease in lymphoid structure.

Open crypts are often to be seen with the caseous material projecting. Often the folds of pillars are attached and close the mouths of those crypts, and thus prevent drainage and often produce pertonsillar abscess. Patients thus affected will often spit up foul smelling particles and are subject to frequent attacks of sore throat. Children with diseased tonsils are always more susceptible to diphtheria and scarlet fever and other infectious diseases.

The frequent association of rhematic fever and tonsillitis is strong evidence of the tonsil being the atrium of infection. We are told the word "rheumatism" means nothing, and is only a hitch-

ing-post to tie to when we dont know what else to diagnose our case, as all those so-called rheumatic troubles are no more nor less than an infection, and the tonsil is very often the avenue of infection.

One author gives a series of one hundred and twenty-five cases of articular rheumatism of which he permanently cured ninety-eight cases by tonsillectomy. An eminent authority advocates the radical removal of the tonsils at the beginning of every attack of severe rheumatic fever. When a tonsil is acutely inflamed is not the ideal time to operate, but this eminent specialist considers the danger of operation mild compared with the danger of heart complications that are liable to occur during an attack of rheumatic fever.

German authors have laid great stress on nephritis resulting from diseased tonsils, as very often they find streptococci in acute nephritis of tonsillitis identical with those found in scarlet fever. Practically all enlarged glands of the neck are infections by way of the tonsils, and practically all tubercular glands of the neck are introduced by way of the tonsils, as about six per cent of all diseased tonsils examined were found to be tubercular. The first step to cure any form of enlarged or diseased cervical gland should be the complete removal of the tonsils. After thorough removal of tonsils most of our cases of enlarged glands in the neck will get well without any other treatment, the source of infection being removed, and vice versa remove the diseased glands in the neck and leave the diseased tonsils, and you will be pretty sure to have a recurrence.

As for the operative treatment: Every man has his own method, and any man who is doing good, thorough work with his present method, perhaps should let good enough alone. It matters little which method is practiced, so you do complete work. The tonsillotomy with the old-fashioned tonsillatome is entirely out of date. The important thing in the operation we wish to accomplish is thorough and complete removal of the tonsil and capsule. The tonsil is to be dissected out completely. There is only one form of enlarged tonsil for which there is an excuse for tonsillotomy, and that is in one class of cases only, and those are hyperplastic tonsils in young children when the tonsil is so large as to interfere with breathing.

Operations on adults can be fairly well done under cocaine and adrenaline anesthetic. In operating on children a general anesthetic is required and ether preferred. A good light is very essential, having the child in recumbent position with head turned to side. First grasp the tonsil firmly with the tonsil forceps—then separate the pillars from the tonsil starting above and working around on either side and always working toward the tonsil and downward. In that way there is very little danger of doing harm. My method is—after getting the tonsil well separated from the pillars and loosened

from above, so it can be well drawn out into the throat, to use the wire snare for removing the tonsil.

As a rule, after one tonsil is removed our patient may start to move and cough and necessitate a little more anesthetic. A nice way to do this is to have a long firm forcep with a firmly folded piece of gauze with an antiseptic astringent powder dusted in this gauze—press this fold of gauze into the cavity from which the tonsil has been removed and hold it there firmly and across the throat while a few more whiffs of anesthetic are given. In that way your patient will be ready to continue the operation in a minute, and you will during this time have the hemorrhage checked. While hemorrhage is not severe, unless the pillars are considerably injured, it may be a little troublesome in some cases. The anesthesia should be rather complete, as it is very difficult to work in the throat when patient is coughing, moving, etc. In case hemorrhage should be severe and alarming, which will be very rare, the bleeder should be tied, if it can be found. If not a pledget of gauze should be packed in cavity from which the tonsil has been removed, and the pillars sutured tightly over it—sort of lace them together. I always have a needle and suture at hand to use in case of severe hemorrhage, but never have had occasion to use them. I usually swab the tonsil cavity lightly with tincture of iodine after the tonsils have been removed. The Sluder method is applicable in some cases, but I think it is not practical in all cases especially where the tonsil is submerged.

The adenoid operation is very easily and quickly performed. I always remove tonsils and adenoids at same time, except in the very young. In doing both tonsil and adenoid operations always remove the tonsils first to avoid troublesome hemorrhage from the adenoids. The adenoids can be removed well with the Gottstein curette, or LaForce's adenotome. Personally, I am quite partial to the LaForce instrument. Have used it in about sixty cases and am well pleased with results.

To summarize, will say:—

Any child subject to ear-ache or otorrhea, or attacks of difficult hearing has adenoids, and should have them removed.

Any child subject to catching cold easily, having attacks of asthma and hay fever, etc., should be examined for adenoids.

The welfare of the ear very often calls for removal of tonsils and adenoids.

Cervical adenitis is practically always secondary to diseased tonsils.

From twenty to thirty per cent of all children have enlarged or diseased tonsils and adenoids.

About six per cent of all diseased tonsils are tuberular.

There is no record where the proper removal of diseased tonsils or adenoids did harm.

Diseased tonsils should be removed as completely as a diseased appendix, as no surgeon would think of removing a part of a diseased appendix, neither should a part of a diseased tonsil satisfy the operator.

Tonsils are portals of local and general infection.

Pathologists tell us diseased tonsils are a very active cause of arteriosclerosis.

Specialists tell us that ninety-five per cent of the naso-pharyngeal cases develop some form of ear complications.

Secretion from diseased tonsils injected into a rabbit produces a typical attack of acute rheumatism.

CAESAREAN SECTION

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"Caesarean section is the removal of the child from the uterus through an incision in the abdominal wall"—De Lee.

Vaginal caesarean section consists in the incision of the auterior and posterior vaginal walls exposing and incising one or both of the anterior or posterior cervical lips in the median line up to the peritoneal reflections. The purpose of the operation is to rapidly open the cervical canal sufficiently to quickly extract the child by version or forceps. It is said that this method gives less shock than the abdominal caesarean section. The vaginal caesarean section has found great favor in Germany but not in the United States. It cannot be used in cases of abnormal relationships or neoplasms.

The abdominal extra-peritoneal caesarean section also is favored by some German surgeons (Kuester). The method consists in exposing the uterus by a low abdominal incision and delivering the child by forceps through an incision of the uterus at this point. The main purpose of this method is to keep away from the general peritoneal cavity in the presence of infection, thereby lessening the dangers of general peritonitis and sepsis. The Porro-caesarean section is more applicable to this class of cases and has a preponderance of authority in its favor.

The usual indications for performing the vaginal caesarean section are:

1. Abnormality of the cervix in—rigidity of the os and cervix, carcinoma of the cervix, tuberculosis of the cervix, faulty position of the uterus including the cervix following operations with the intent of correcting retrodisplacements, cicatrical stenosis, fibroma.

2. When the mother's life is in danger and a living child is to be saved but the cervix is rigid and unyielding, as in eclampsia, abruptio placentae, placenta previa, hyperemesis gravidarum. Late in pregnancy when great haste is demanded, uncompensated heart

disease, lung disease, and a few other acute complications on the part of mother and child.

In carcinoma and tuberculosis of the cervix, the tissues are very friable and abdominal caesarean section is often preferred over vaginal caesarean section, also frequently the diseased uterus can be better removed at the same time.

The position of the cervix is frequently found so high in faulty position of uterus that it is inaccessible to the surgical technic necessary in vaginal caesarean section and abdominal caesarean section is mandatory.

In eclampsia cases, where the convulsions ante-date labor, we should be nearly unanimous in the belief that the uterus should be emptied immediately both for the mother's sake and to give the child the best chance for life. The various methods to produce dilatation require from three-fourths to two hours time under general anesthesia and, in addition, the liability of infection from manipulation and trauma cannot be ignored. An abdominal or vaginal caesarean section, depending on the judgment and experience of the operator, would accomplish the desired result, in this condition, in a more ideal way than any other method of delivery.

I can not advocate the vaginal caesarean section in placenta previa centralis for the following reasons, and, if an operation is necessary, the abdominal caesarean section would be my choice.

1. Hemorrhage frequently obscures our field of vision, making the operation an extremely hazardous one.

2. We can not locate the site of the attachment of the placenta to the uterine wall and our incision would often involve the placenta or its uterine blood supply again increasing the hemorrhage.

3. In only one in five or six hundred cases, do we find a rigid os.

4. A slight tear in the cervical tissue often causes enough loss of blood to turn the tide against us.

In a roomy pelvis, where the os and cervix are rigid and unyielding, or the cervix consists of firm scar tissue following repair of laceration or amputation of the cervix, the vaginal caesarean section can be performed quickly and gives almost ideal results.

On account of the general improvement in surgical technic, caesarean section has a much broader field of election than in former years. Now, it is not the danger of the operation but the condition of the patient at the time of operation, and often the preexisting pathological condition, making normal labor impossible or hazardous, that concerns the obstetrician of today.

The indications for caesarean section are absolute and relative. It is absolute when the child, even if subjected to mutilating operations, can not pass through the parturient canal with safety to the mother. No matter if the child is dead or alive and regardless of the condition of the mother, the abdominal route is imperative.

A contracted pelvis of a conjugate vera of less than 6 1-2 cm. or an immense child are the absolute indications.

The absolute indications are easily diagnosed and bring about no controversy, but, in the relative indications, the obstetrician has a very difficult task before him and frequently, after exercising due care and deliberation before passing final judgment, the decision may be erroneous.

In any atypical case of labor, the ideal procedure to follow is the selection of a method of delivery with the least element of danger to the mother and child. However, if preference must be given to either, the child should be of secondary consideration. In taking this position, we should not seek a method to lessen our responsibility to the child. It has been too easy in the past to tell the parents the child would not have been right anyway, even if it had survived the ordeal, when the truth of the situation was very simple —the so-called obstetrician in charge totally ignored the living child, because of incompetency, or was protecting his own reputation and keeping the other fellow out who could easily have brought about delivery saving both mother and child.

A contracted pelvis with a conjugate vera between 6 1-2 to 8 1-2 cm., depending on the size of the child, calls for caesarean section, high forceps, pubiotomy, symphiseotmy, version, craniotomy, embryotomy, premature labor or expectant line of treatment. They all have their advocates.

I would never advise abortion and very rarely premature labor in this class of contracted pelvis. We can not determine the size of the child and the time of its safe extra-uterine existence, also the manipulation necessary is not without its dangers to the mother and child. Permitting the pregnancy to go to full term, with labor assured, and terminating labor by caesarean section, or possibly by some other surgical procedure, is more in keeping with present day teaching.

If it were possible to determine, with nearly definite exactness, the size and consistency of the child (especially the head), the gain in the measurements of the pelvis during labor, with the aid of the different positions such as Walcher's, De Lee's and others, the nervous stamina and mental poise of the patient, the expulsive powers and efforts of the uterine and abdominal muscles, how much below par the general physical condition has suffered in line with the causation of the pelvic deformity and the complications that we frequently encounter even in the normal pelvis, it would not be so difficult to arrive at the proper procedure in this class of cases.

While it can not be denied that methods, other than caesarean section, in this class of cases, frequently give satisfactory results, I believe caesarean section, done by a competent man with proper assistants and environments, is technically correct and will give the best results to mother and child in a large per cent of these cases.

Caesarean section is clearly indicated in placenta previa centralis providing pregnancy has advanced beyond 8 1-2 months, the child is alive and the mother is in good condition and not septic.

Caesarean section should be the method of choice in abruptio placenta if the patient is wholly unprepared for labor and the external and concealed hemorrhage is alarming and progressing.

While the mortality may be high in eclampsia, because of its pathology, caesarean section is frequently the best method to evacuate the uterus and most favorable for the child.

Neoplasms of the pelvic viscera that interfere with normal labor are an indication for caesarean section. The tumors can also be removed at the same time. At least, we can deal with the pregnancy and neoplasm intelligently as we can see the actual conditions.

With the low morbidity and mortality after caesarean section, at the present time, the operation should be given serious consideration in every case of difficult labor. I must confess that experience has forced me to take this stand. I can now recall several cases in my obstetric work, and that of others, when the child was actually killed or ruined mentally and physically and the mother's life and health jeopardized by prolonged labor, hemorrhage, infection and trauma produced by the heroic use of the forceps or version.

You all have had similar experience. Through hereditary influence and her manner of living, the woman of today is frequently poorly equipped for normal labor. The physician dreads the labor and knows they are unfavorable even if the mechanical difficulties are only slightly difficult or average. Why? Because the woman lacks mental poise, the whole nervous system is unstable and the constitution generally, being away below par resulting in weak, erratic, and ineffectual labor pains. Instead of following the expectant treatment for many hours and finally terminating labor by intra-pelvic operations, in these cases the method of choice should be caesarean section done at the proper time under the proper conditions.

Caesarean section should not be done when the mother shows evidence of infection, has probably been infected by careless examination or manipulation, or after repeated application of forceps, and with the belief that a living child can be delivered unless there is an absolute indication to the contrary.

In certain cases, a second, third or even a fourth caesarean section is justifiable on the same patient. We certainly have no legal right to sterilize the patient unless we get the legal consent of the mother and father and I doubt our moral right to do so even then.

CASE REPORTS.

First Case.

Mrs. M———, age 30, first pregnancy, no examination by physician until labor had started. Deformity of pelvis found but labor allowed to proceed and forceps used in an effort to terminate the difficult labor

which had been in progress five or six hours. Physician found such a deformity of pelvis that no chance of normal delivery could be brought about. Advised caesarean section and sent patient to hospital. Examination revealed conjugate of about 8 1-2 cm. and head unable to engage in superior strait, also marked deformity of spine in lumbar-sacral region. (kyphosis). Median incision made extending from just above the pubic arch to three inches above umbilicus. After uterus was exposed, abdomen was protected by pressure by a second assistant on abdominal walls on each side also by pads walling off the uterus from the abdominal cavity completely. Another assistant grasped the broad ligaments and made considerable traction upward to control hemorrhage. Fundus incised in median line and child extracted by grasping shoulder first in order to deliver the head as quickly as possible. Forceps applied to cord and placenta separated from its uterine attachments and turned over to a fourth assistant. The interior of the uterus was carefully swabbed by gauze to remove all membranes. All uterine tissue, not including the mucosa, was sutured by chromacized catgut placed interruptedly about one-eighth of an inch apart followed by two rows interrupted chromacized catgut, only involving a small amount of uterine muscle and peritoneum. Uterus dropped back into position and abdominal wound closed. Mother, and child weighing twelve pounds, made an uneventful recovery.

Second Case.

Same patient returned two years afterwards. I did not learn of her condition until the seventh month and advised her to come to the hospital as soon as labor started. At the end of 280 days, patient came to the hospital and a second caesarean section was made. The incision was made just to one side of the old incision and the uterus was found to be firmly adherent to the anterior abdominal wall also the large omentum was involved to a great extent. Child weighed eleven pounds. With the exception of looking after these adhesions and resection of the fallopian tubes to prevent future pregnancy, the operation was performed in the same manner as in the first pregnancy and with the same happy end results.

Third Case.

Mrs.————,age 27, second pregnancy—first pregnancy at age of fifteen years, difficult labor, child weighing only five pounds, girl now living and well. Case was not examined before labor pains started. Pelvis found deformed, also spinal deformity in lesser and sacral region. (kyphosis), conjugate about 9 1-2 cm. Pains allowed to proceed and attempt to apply forceps failed. Case was brought to the hospital after active labor had progressed four or five hours. Caesarean section made under the same manner as in case No. 1 and No. 2, only the placenta was attached on anterior wall of the fundus and the incision was made through the placenta. Child weighed nine and one-half pounds. Both mother and child made perfect recoveries.

Fourth Case.

Mrs.———, age 30, weight 200 pounds, second pregnancy—curettement for first pregnancy following miscarriage at two months. Case not examined until labor started. Labor permitted to go on ten hours, at the end of which time, pains having been good, child not engaged, no forceps applied, examinations revealed pelvis 25 per cent smaller in all measurements than normal pelvis and large child. Caesarean (abdominal) section made in same manner as in other cases only high incision. Both mother and child of ten pounds made good recoveries.

I believe it is better to wait for pains to begin before attempting the caesarean section, we are sure of the end of pregnancy and the child is

not handicaped by premature birth, also we can feel assured uterine contractions will aid in controlling hemorrhage. I am unable to advise unless it is in making the high abdominal incision any method to prevent the troublesome adhesions, I encountered in the second case. If we make our incision of the uterus well to one side, we are just about as liable to get adhesions as if the incision is made in the median line. If adhesions can not be prevented, it is far better to have them in the median line than to one side for fear of producing misplacement and rotation of the uterus and the ensuing comlications that may follow.

ENLARGED TONSILS AND ADENOIDS, SEQUELAE, AND INDICATIONS FOR, AND OBJECTIONS TO, THEIR REMOVAL

LORAN M. MARTIN, B. S., M. D., Ft. Dodge.

The effects of enlarged tonsils are so well known, that it will only be necessary to refer to them briefly.

The enlargement of the tonsils takes place so gradually, that the patient is unconscious of their presence. The voice is thick and the articulation is apt to be indistinct. Indigestion is not uncommon and this is not to be wondered at, when one considers the amount of "rotten cheesy stuff" that is often expectorated and more or less of which must necessarily be swallowed, and absorbed leading to a general ill-health.

An eustachian catarrh may be made worse, and may be complicated by an acute otitis media and mastoiditis, the sequelae of which may be a meningitis or a brain abscess and death.

Enlarged tonsils are associated with enlarged adenoids and it is at times difficult to which to attribute the mouth breathing, snoring, etc. In over seven hundred children that I examined at St. Luke's Hospital, Chicago last year with enlarged tonsils, I don't recall a single case that was not associated with enlarged adenoids.

Indications for their removal:

(1) Nasal catarrh.

(2) Middle ear affections.

(3) Interference with respiration, either in the day or night time.

(4) Chronic lacunar tonsillitis.

(5) Acute tonsillitis and peritonsillar abscess (frequent attacks).

(6) Chronic enlarged glands of the neck.

(7) Laryngitis (repeated attacks).

(8) Follicular laryngitis.

(9) Articular rheumatism after medical treatment has failed; removing the tonsils and making an autogenous vaccine.

(10) Acute attacks of rheumatism, following acute attacks of tonsillitis.

(11) Septic absorption through the tonsil producing a condition of ill-health.

The following objections to the removal of the tonsils have been given.

(1) They may grow again.

This is the result of the old tonsillotomy or snipping the tops off, a procedure practiced too frequently by many of our practitioners.

(2) Tonsils will disappear or be outgrown.

It is true that they tend to shrink at about twelve and tend to disappear at or shortly after puberty. But diseased tonsils do not disappear and those that are simply enlarged, have produced their ill effects before the atrophy has been completed.

(3) Removal will change their voice.

If there is a change it should be for the better in competent hands. However, in the hands of the operator who is not familiar with, nor has any regard for, the anatomy of the parts, cutting away the pillars, fascia and part of the superior constrictor muscle of the pharynx, with the resulting scar tissue and contractures, the singing voice may be totally ruined.

(4) Their removal may stop growth. This is without fact and may not be considered.

(5) May produce sterility. This is absurd and may be passed with a word.

(6) Has been placed there by nature for a purpose and therefore should not be removed. Granting that a tonsil has some protective power, there is no question but that a gland which has lost most of its lymphoid tissue and with its crypts full of septic materials, is of no benefit and a positive menace.

(7) Risk from hemorrhage. After excluding the acutely inflamed cases, hemophilias and malignant growths, the amount of hemorrhage depends upon the individual operator. If the tops are clipped off, as in the old guillotine or the more modern method of Sluder, the hemorrhage may be profuse and even fatal. But in careful enucleation, by dissection and snare, without injury to the pillars etc., there is absolutely no danger from hemorrhage.

The effect that adenoids have upon an individual depends upon its age, size of growth and the size of the cavity in which it grows.

The effect upon an infant is that of nasal obstruction, or its inability to breathe through its nose. It is apt to have convulsions and a tendency to swallow its tongue. When asleep the mother notices it struggling for its breath and takes it up for fear it will choke to death.

After about the third year the typical "adenoid face" is noticed. The mouth is open, the lips are thick, the teeth project and the chin recedes, giving it a stupid and listless expression. Many have discharges from the nose, parents remarking that they always have a

cold. They breathe noisly, and at night breathe heavy, snore, are restless and awaken with a headache. They do not masticate their food properly, as they cannot keep their mouth closed, owing to the nasal obstruction, with the resulting digestive disturbances.

The most important secondary affection is to the hearing, and I shall give the statistics of C. B. Wood in one hundred and forty-nine adenoid children, sixty-three or forty-two per cent had adenoids. Wiebert found in three hundred and seventy-five children between six and one-half and twelve and one-half years, two hundred and thirty-one or sixty-two per cent had adenoids and twenty-seven per cent had some ear trouble. Cohn in the examination of one thousand five hundred and seventy-three school children, found three hundred and fifteen more or less deaf and in these sixty per cent due to adenoids three hundred and ninety-four had some ear trouble.

The greater number of discharging ears are due to these growths. Many have enlarged glands in the neck, nasal catarrh, bronchial cough, undeveloped chest, are anemic and suffer from some form of stomach and bowel trouble.

It is not to be wondered at, when you consider the handicap under which these children are reared, that they should be deficient physically and mentally. Adenoid children often have rickets, as shown by the flattening of the lower ribs, retracted chest and pigeon-breast. They are indifferent, easily tire and are bad-tempered. Complain of their eyes and have frequent headaches, and are often behind in their studies. In one school of three hundred and seventy-five boys, of the twenty-six that were behind in their work, twenty-two or eighty-four per cent had adenoids. (Thompson). However, the child's deafness undoubtedly plays a part in its mental condition.

These are cases that do not have symptoms of nasal obstruction, that shows their ill effects, as malnutrition, undevelopment, dullness and nasal catarrh. This must be accounted for by an internal secretion. That it was due to the adenoids, is shown by the beneficial results after their removal.

The adult shows the effects of having had adenoids in youth. The continued mouth breathing has produced a chronic hypertropic catarrh of the pharynx and larynx and there is apt to be hypertrophied turbinates, septal spurs and deviations. The ears show that more or less damage has been done. The growths themselves may have disappeared or there may only remain fibrous bands and adhesions around the eustachian tubes.

Indications for their removal.

(1) Headaches and nervous symptoms that cannot be explained by other conditions.

(2) Night terrors.

(3) Catching cold easily.

(4) Chronic nasal catarrh.
(5) Affections of the ears.
(6) Spasmotic cough.
(7) Mouth breathing in the day or night time.
(8) Chronic enlargement of the glands of the neck.
(9) Commencing malformation of the chest or hard palate.

As to the result of their removal, Westerhous states:—It is beyond question that ninety-nine out of every hundred school children from whom adenoid vegetations have been removed improve markedly in every way within a few weeks of the operation. There are few operations in surgery where the results are so promptly beneficial, and the general and life long benefits to the patient are so evident. The dull, flabby, listless and stupid child becomes healthy looking, bright and active, and its existence becomes a joy instead of an endurance.

A child who has contracted an infectious disease is very much less liable to have ear complications if the adenoids have been previously removed. Those that have "running ears" are generally benefitted by their removal.

There is a possibility of adenoids returning in a very small percentage of cases, possibly two per cent. An insignificent number when one considers the benefit resulting to the others.

It is the duty of every physician to make a special effort to explain the dire results of enlarged tonsils and adenoids to the laity. Dentists may do much to give the parents the proper advice upon this subject, as they may be the first, during the examination of their teeth, to have the opportunity of examining their throats.

With the dire results of these enlarged growths and the brilliant results of their removal in mind, no conscientious physician will hesitate to advise their removal, himself, if competent or refer them to men specially trained in this work. And let me again impress upon you the desirability and necessity of their early removal. No child is too young or too old. Remove them before permanent injury has resulted.

CASE OF PELLAGRA IN SIOUX CITY

J. P. DOUGHERTY, M. D., Sioux City.

August 15th, 1913 I was called to a local sanatarium for the treatment of alcoholics to see patient M. T. L. I found that L. had been suffering for two or three months from a recurrent diarrhea, that he had lost fifteen or more pounds in weight, that there was a rather indefinite history of mental disturbance and that he had a peculiar dermatitic scaly, pigmented eruption on extensor surfaces of hands and forearms. As this eruption reminded me of the rather fleeting glimpses I had gotten of three or four cases of pellagra which I had at various times seen in Chicago and New York, my interest was aroused and I at once called in consultation. Dr. E. M. Williams, a specialist in diseases of the nervous system, who has had for a man located at this place a large experience with pellagra, obtained during his connections with various institutions for the treatment of the insane. I also called Dr. E. D. Frear, a specialist in diseases of the skin. These men as well as Drs. J. A. St. Onge and L. W. Dimsdale, who were also present, concurred in the diagnosis of pellagra. Unfortunately we were denied the opportunity to keep this case under observation or even to get a complete history or make a thorough examination.

The following incomplete notes were, however, obtained:—

Patient aged about forty-five, married, switchman for the past ten or twelve years. During this time has lived in Sioux City with exception of two or three years spent at Melrose, Minn., and a brief visit to Oklahoma within the past year or two. No history of previous illness was obtained with the exception of an injury received last December in which L. was squeezed or pinched in region of right hip and groin. This injury he said had disabled him to the present time.

L. admits that he has been for years a user of alcohol and that since his injury the indulgence has been excessive. He had come to the sanitarium following a severe debauch.

Patient is poorly nourished. Has lost fifteen pounds in past eight weeks. Temperature 99 1-2, pulse 120, respiration 17. Nothing abnormal found on cursory examination of heart and lungs. Dorsum and edges of tongue do not present any evidence suggestive of pellagra. Denies that he has had any sore mouth, but examination shows small ulcer on buccal mucosa on left side, and hyperemic area beneath tongue which looks like healed ulcer in this region. Appetite gone. History of ravenous, almost abnormal appetite six or eight weeks ago. Suffering from severe diarrhea. Discharges every twenty minutes to two hours. This has lasted for about a week. These discharges, attendant states, are extremely foul smelling. In-

deed the odor alarmed attendant and hastened the calling of a physician. Abdomen distended and tympanitic.

Patient's fingers are trembling. Coarse tremor about 50 to the minute. Patellar, ankle and forearm reflexes active or exaggerated. Pain sensation apparently somewhat dulled in lower extremeties, especially on right side. L. complains of pain in lower extremeties, especially below the knees. Some limitation of motion and some tenderness in right hip joint, due he says to injury. Distrubance of sleep and feeling that someone is watching or pursuing thought to be due to alcoholism.

Skin. Over the dorsal surface of hands beginning at about the region of the knuckles and extending to the elbow on right and to within 4 or 5 inches of shoulder on the left side there is an eruption. The line of demarcation on the edges of this eruption is well marked. The character of the eruption is everywhere dry and scaly. In the central areas, that is the parts most distant from the margins, the heavy scaling of large flakes is complete and new skin is visible. This new skin is somewhat rough and in places is somewhat obscured by a scaling of a finer character than the margins. This new skin has a distinct pinkish tinge in places. At the margins there is a fringe of coarse scales from one-eighth to three-eights of an inch wide. Beyond the coarsely scaling area there are in places wide areas of pigmentation where the skin has a brown or chocolate color. These pigmented areas are one-half to one inch wide and three to eight inches long. Over each elbow there is a sort of cap three inches in diameter, consisting of dry dirty horny thickened epidermis, evidently ready to desquamate en masse.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

EDITORIAL

In previous numbers of the journal we have called attention to the Workingmen's Compensation Act in Iowa. We published a contract which was entered into between an insurance company operating under the law, and physicians desiring to secure this class of practice. It was presumed from the reading of the act that the matter of selecting a physician for injured employe was entirely in the hands of the insurance company or the employer, and that the employe would be deprived of the right of summoning his own family physician in case of accident. We have received an interpretation of this law from Mr. Garst, Iowa Industrial Commissioner, which places the whole matter as we believe on a reasonable basis. It is not intended to deprive the workingman of his family physician provided the family physician is a competent physician or surgeon. It is so important to the workingman that he should receive the very best surgical services when injured, and so important also to the employer that the period of disability should be reduced as much as possible by furnishing the best medical services, that the state practically steps in and determines who is a competent physician. It has been so often the habit of certain doctors to charge excessive fees for services rendered industrial workers, that a schedule of prices has been fixed, which under the circumstances may be considered as reasonable.

The language used by the Commissioner is as follows: "It is the understanding of this department that reasonable service is intended to cover quality as well as price. So that when the injured workman has a competent family physician or surgeon, and asked to have his services, it is a reasonable service within the meaning of the law. But if the family doctor or surgeon has not the qualifications necessary for peculiar injury, then, even though requested by the employee or his family, it would not be reasonable service.

As to the fees charged, a charge in excess of that which would be charged the workman, either in number of visits or the amount, were he paying the bill, would not be reasonable. It is the purpose of this Department to see that the injured employee gets the best possible care. For that reason it would be looked upon as unreasonable for an employer or an insurance company, or a group of employers, to farm out, at a cut price, for mercenary motives, the hospital, medical or surgical care required under this act, but it is not the purpose of this Department to discourage employers from or-

ganizing a corps of medical and surgical experts to care for their employes. A doctor who has been guilty of excessive charges or who has been guilty of assisting an injured employe in malingering that his fees might be increased would be deemed unfit to render reasonable service.''

We believe the Act in itself is reasonable and we also believe that the schedule of fees is also reasonable considering the circumstances. It must be admitted that the medical profession owes a certain duty to the state. All the civilized world over it has been conceded that some provision should be made for the care of industrial workers who may be injured, and that the burden of this must rest upon the community, of which the doctor is one of the elements. The only unfair feature of this act as we see it, is that the provision only covers the care of the injured employee for two weeks. The law ought to be modified to conform with the law of Illinois which provides eight weeks or the law of Ohio which gives the Commission the right allowing a sum in excess of that mentioned in the act, provided the circumstances demand it. It will be readily seen that the $100.00 limit to the expenses in one case may be unfair.

Referee Consultants.

We have called attention on several occasions to the influences of government insurance on the laboring classes in England. It has been asserted over and over again by English practitioners of large experience that the length of disability has very materially increased since this insurance was adopted, and that malingering has become common to an extent not thought of in years gone by. The difficulty appears to be that when the laborer can receive a part of his wages and medical care and attention without cost to himself, that he is indifferent about getting to work again and is inclined to insist on the insurance company caring for him indefinitely.

It has been found that physicians doing industrial practices are not willing to antagonize their pannel by insisting upon early adjustment of their claims, which might apparently be regarded as in the interest of the insurance company operating under the government. To prevent grossly fraudulent claims, it has been found necessary in England to employ a disinterested class of specially trained doctors to examine the injured man if the disability continues beyond a reasonable time. These doctors are called ''referee consultants.'' It can be very readily understood that a doctor to be useful in his community must be in sympathy with his patients and avoid unpleasant antagonism so far as possible. The physician of a pannel might easily be of the opinion that a workman was claiming disability when no real disability existed, or that a disability was prolonged beyond reasonable extent. He might know all this and yet feel that if he was to advise the insurance company to that effect that it would cause prejudice and ill-feeling towards him, which

would spread to such an extent as to seriously harm him. Of course under this government insurance scheme and the establishment of pannels, the doctor is not so much at the mercy of his patients as he would be if the patient had a voice in determining who the doctor should be, but quite likely the prejudice would be greater and perhaps might be entirely unfair because the doctor was actually employed by the Government to render services in a definitely outlined district, and that the people living in this district must employ the doctor designated by the Government, so it is quite probable under such circumstances that a great amount of tact will be necessary to convince the laboring man that the doctor is really their friend, and hence the apparent necessity of insurance companies employing examiners to protect their interest.

In this country several states have adopted a Workingmen's Compensation Act, operating on a similar basis but being different in different states; the services rendered the workingman are provided by a doctor furnished by the employer on a contract basis. In England the doctor is appointed by the Government and is really in the government service insofar as industrial work is concerned. The qualifications of such a doctor are passed upon by a committee appointed by the Government for that purpose. The physician employed under the laws of the various states, hold his place at the will of the employer, and if he serves the employer's interest well, is not liable to be disturbed in his position unless the employees assume a threatening attitude. In Ohio a better law exists, in that the services are rendered under the direction of the state, and not under the direction of the insurance company or of the employer. Perhaps this will lessen the necessity for expert examiners, at least until some further modification of the laws are made, giving the state a closer relation to the service.

In Relation to the Employment of Local Attorneys in Malprictice Suits.

The Committee on Medical Defense is especially anxious that when members of the State Medical Society are sued for malpractice, that they will not employ local attorneys without first confering with the Committee or with Wade, Dutcher & Davis. The failure to observe the rule touching this matter has cost some additional expense and not a little trouble in the preparation of an answer when notice of suit has been filed. It is not necessary to go into this matter in much detail, but it is well known that many attorneys in large and successful practice, fail to get the technical points in malpractice suits, and sometimes occasion serious delay. Their answer is sometimes faulty, in other words, it causes more or less embarrassment. It certainly would not be a hardship on any physician to comply with this rule.

We desire further to call the attention of members of the So-

ciety to the fact that when a counterclaim is sued against a doctor after the statute of limitations has expired, does not involve anything more than the amount of the bill unless the party is a minor, and judgment cannot be secured against a physician for malpractice. We have had a few cases of this kind come up to us, which we have declined because the Committee on Medical Defense cannot be in any way regarded as a collecting agency. We shall of course be obliged to decline all such cases.

We are publishing in this number the address delivered by Dr. Arthur D. Bevan of Chicago before the Sioux City meeting of the Iowa State Medical Society.

There are some things in this address that cannot be too closely thought over, particularly that relating to "team-work" in the practice of medicine and surgery. Dr. Bevan has pointed out that in towns of 10,000 people or more, that it is possible for a group of men to join together in making up a strong combination for the diagnosis and treatment, particularly of surgical cases. The profession of Iowa has complained bitterly because so much of the work goes to certain well known medical centers. If the gentlemen who are interested in successful surgical practice will follow the plan adopted by surgeons that are really successful, not only in getting the best results but also in getting the largest patronage, it will be found that some manner of organization should be affected by which the skill and ability or four or five men may be utilized in all important cases.

A recent report from an Investigation Committee of Bellevue Hospital, found that only about forty-seven per cent of the diagnoses were correct, as determined by a port mortem examination, and Dr. Horst of the Rockefeller Institute, who worked out the statistics, together with a committee, commented upon the careless methods of examination employed even by men who have reached such eminence as to entitle them to a place on the Bellevue Hospital staff. This plan of organization should be so arranged that the fee would not be so large as to discourage patients submitting themselves to such investigation. Wealthy men of course can easily pay the expense of a separate fee for each examination, but the man in moderate means finds these added fees to be burdensome. It will not be taxing the ingenuity of the American practitioner to find out some way by which all these parties can receive a moderate compensation for their work and still keep the charge within the reach of the average patient. One of the strong points of the Mayo Clinic is the fact that they can work out all these problems by the team-work method without making a burdensome charge. From many years of experience and observation and from observations of very recent date, we are thoroughly of the opinion that if the medical profession in Iowa hope to compete with the profession outside, some plan of this kind must be adopted. It will be found impossible for the med-

ical profession to continue methods that have been thoroughly discredited in all business lines.

Another point in Dr. Bevan's address needs thoughtful consideration, and that is in reference to the Medical Department of the Iowa State University. The doctor believes that a very creditable school can be maintained at the University, if proper conditions obtain. We infer from this that if high grade men are placed in the various chairs and the profession of the state come liberally to the support of the University, we can maintain a very excellent medical school in our own state.

It may have entered the minds of some that the report of the Committee on Medical Education at the Sioux City meeting, was an attack on the University, having for its object the destruction of the school itself. This I do not believe was the intention of the Committee, but simply to call attention to some of the things that ought to be corrected. We believe that the faculty of the University will join us in the belief that there are many things that ought to be corrected, and will be corrected as rapidly as possible. The object of publicity in all these matters is to bring about a healthy public sentiment, which must be considered if we hope to reach the higher ideals in all economic and social problems.

We trust our readers will ponder upon what Dr. Bevan has said, and feel that by joining hands we can bring about "certain favorable conditions" referred to in his address. I believe it is a mistake on the part of the University to feel that the profession in Iowa is antagonistic, and it would be far better for them to assume that whatever criticisms have been and are being made, are to hasten the bringing about of the more "favorable conditions." It is not quite fair to the University that the profession in the state should assume an unfriendly attitude to the University, but aid the institution, in a critical way perhaps, to bring about what Dr. Bevan evidently had in mind. It would be most unfortunate indeed for the profession and for the medical school to stand opposed to each other in an attitude of belligerency, and for each party to assume that unfair means are employed. We believe that if the University faculty and the profession of the state will bring all the influence they can bear upon the Board of Education, that we shall cease to have a University party and an Anti-University party, but rather that we stand together for the one common purpose of making professional matters in Iowa much better than they are today.

If you are need of an x-ray, you should investigate the merits of the one advertised in this Journal, The Vulcan Coil is well worth your consideration. It is handy, neat, compact, and will do the work. It has nothing to wear out or get out of order, and we can recommend it to you as a valuable instrument.

These advertised preparations have passed the rigid scrutiny of the advertising department of the American Medical Association and are presented to you as important aids in the practice.

Again we say, if you do not patronize our advertisers, we will loose them.

Read the advertising pages just as carefully as the rest of the Journal and you will greatly profit thereby.

We start two new one-half page advertisements in this issue:—Huston Bros. of Chicago, surgical supplies; and Katherine L. Storm Co., of Philadelphia, abdominal supporters. Both of these firms are worthy of your patronage. Consult them as to your desires and you will be helped.

Have you used the coupon of the Uncle Sam Breakfast Food Co? If not, you are missing something good. Get in touch with this company and you will be able to recommend a suitable diet for your constipated patients.

In reading the advertising pages, don't overlook the cards of our members whose names are there shown. All these men are worthy of your consultation.

If you are interested in the artificial feeding of infants, you will do well to investigate Mead's Dextri-Maltose.

MEDICINE IN IOWA PRIOR TO 1876

D. S. FAIRCHILD, M. D.

We have been able to find biographical sketches of a few of the men whom we include in this history, David L. McGugin, M. D., Member and Ex-President of the Society.

Dr. McGugin was born in West Middleton, Washington county, Pennsylvania, in the A. D. 1807. Acquired his literary education under Alexander Campbell, after the completion of which he commenced the study of his profession, under the supervision of Dr. Andrews, an ancient medical gentleman of Steubenville, Ohio, and graduated at one of the oldest medical schools of the country—the medical department of the University of Maryland, at Baltimore. In western Pennsylvania, he entered upon the practice of his profession about the year 1829. Was married to the daughter of William Welsh, Esq. of Washington county Pennsylvania. In the fall of 1837 with his wife and daughter, he emigrated to Knox county, Ohio, where, in consequence of feeble health, he located on a farm in the vicinity of Mount Vernon. In 1840, 1841, he represented the county in the legislature. He afterwards removed to the town of Mount Vernon, devoting his energies to the practice of his profession

until the Mexican war broke out, when he was appointed surgeon in the army, in which capacity he served with marked ability. At the close of the campaign, he returned to Ohio, and, with others, emigrated to Keokuk, Iowa, at the time the medical department of the State University was being organized. He was selected as one of its professors, and continued his association with the institution as professor and as president of the faculty up to the date of his death. As one of the editors of the Iowa Medical Journal, he labored unceasingly for the promotion of the profession. He was a member of the board of directors of the insane asylum of Ohio, and afterwards in our own state. Served several years as president of the board of health of the city of Keokuk. Politically, the Doctor was a great enthusiast, a faithful follower of the teachings of Jefferson, and an admirer of Jackson. In the presidential contest of 1860, he was one of six who voted for John C. Breckenridge, who was his beau ideal of a statesman. When the tocsin of war resounded throughout the land, the voice of Dr. McGugin was heard in favor of conciliation and compromise. Many months after the inception of the Rebellion, his convictions underwent a radical change, and he veered to the opposite side, keeping step to the music of the Union. In 1862, he accepted the appointment of surgeon to the 3d Iowa cavalry, and after the battle of Pea Ridge was transferred to the military hospitals in St. Louis, in consequence of failing health. At the urgent solicitation of a host of friends, he resigned his position, and returned to Keokuk to recover his lost energies. Having regained his health, he reluctantly consented to assume charge of the Leighton House hospital, which he conducted with marked skill and ability until his system became thoroughly impregnated with mephitic poison from wounds and other sources. When his vitality was fast ebbing away, he consented, at the instance of his medical friends, to relinquish his charge and devote a few hours to the resuscitation of his failing powers. A condition of asthenia supervened, however, before his plans were perfected for a short travel, from which he never rallied. It was the pleasure of his biographer to see him often in his last hours, and render to him what comfort he could to smooth his way to the grave, for which he was more than grateful, Naturally of a delicate, nervous organization, it was a matter of surprise to his friends to observe his remarkable equanimity of temper,—amid all his sufferings his mind remained clear to the last. He conversed freely about the future; he believed in the Bible, and calmly submitted to the Divine will. A few days before his death, he asked the writer to open the window, exclaiming: "That I may once more gaze upon the blue sky, and contemplate the beauties beyond."

On the 23rd of June, 1865, at 11:30 o'clock, he died. His place, in the profession which he adorned, in the literary and social circle, cannot readily be supplied. His ability was universally acknowledg-

ed. His reputation by no means circumscribed. His usefulness and activity as a contributor to the literature of the profession will be disputed by none, indeed, he loved to discuss the intricate parts of medicine, and with great skill in the adaptation of his inexhaustible vocabulary, would expound the most abstruse theories, and render them so clear that controversy was, in fact, ridiculous.

He was never better pleased than when expatiating upon the beautiful theory of the capillary circulation upon blood. Whether in the presence of the august national association, in the state medical society, before the city medical society, or in the halls of the university, he labored purely for the advancement of science, and the overthrow of everything pertaining to irregular medicine. On the ethics and dignity of the profession he was truly eloquent, and be it said to his honor, that he practiced religiously what he preached. If he excelled, in any particular, his professional brethern, it was in that of a correct diagnosis of disease, securing to him a wide fame as consulting physician; this power was not intuitive, but due to the thorough manner with which he was accustomed to investigate disease. His scholastic attainments were of the finest order. His modes of thought full of originality. As a practitioner, conscientious and skilled. As a teacher, versatile, earnest, and enthusiastic. As a man, sincere, and full of benevolence; sacrificing his own comfort in this desire to benefit his fellow-men.

The last solemn services were conducted in the Methodist church, of which, Mrs. McGugin was a member. His brethern laid his remains quietly beneath the sod, while the multitudes stood around to witness the last honors paid to a man whose memory will not rot in the tomb.—by Professor John D. Elbert.

Dr. John D. Elbert.

Dr. John Elbert was born in Fleming county, Kentucky, May 16th, 1806. At the age of six years he removed with his father, Dr. J. D. Elbert, senior, to Logan county, Ohio, then almost a wilderness, and when hostile bands of Indians exercised a power all but agreeable to the new settlers, who imperiled their very existence by day and night, that the present generation might enjoy peace and tranquility.

At this time the war of 1812 broke out, and Dr. Elbert, senior, tendered his services to the government in the capacity of physician and surgeon, rendering effective service in the army, while the young boy remained at his father's cabin to assist as best he could in the protection of the family. The education of Dr. Elbert was such only as the common schools of the neighborhood afforded. Nothing daunted by the limited means and meagre facilities for the acquirement of knowledge in that region of country, he resolved to be a man of mark, and accordingly availed himself of the books of his friends, who were more fortunately circumstanced. In 1829, he received a license from the hands of Dr. Daniel Drake, of Cincinnati,

after which he established himself as a practitioner of medicine in the state of Ohio, where he pursued his profession with great energy, until the year 1840, when he sought the then far west, a field affording greater latitude to his boundless ambition, which was not restricted to the profession alone; his influence was felt at an early day in the councils of the territorial legislature to which he was elected in 1842, and of which he subsequently became president, likewise, in all matters pertaining to the development of the agricultural interests of the state; was a devoted member of the masonic fraternity, as well as a shining light in the Methodist Episcopal church. His indomitable will, coupled with confidence in the rectitude of his intentions, made him generally efficient and successful in carrying to completion the varied projects which he originated,—an element in his character to which was due his eminence as a practitioner and surgeon.

In addition to the license from the Cincinnati college, two honorary degres were conferred upon him. One by the faculty of the Missouri University, and one by the trustees of the University of Pennsylvania. As a surgeon, he acquired extensive reputation in southern Iowa and northern Missouri, for the bold use of the knife, as well as skill in general management. By his patients he was especially beloved for his prompt attention and kind sympathies. In his friendships he was ardent and wholly disinterested, never counting the cost when he could oblige a friend. Hospitality was his crowning virtue. Nothing afforded him greater delight than congenial company about his table or fireside. His jovial nature and seemingly inexhaustible fund of anecdote, conjoined with a character and manner so eccentric, made him wonderfully entertaining, while his laughter-provoking originalities were a source of much surprise to his friends, who could never really anticipate him. In the review of his many virtues and excellencies of character, we have forgotten to record his faults. If he had any they should be ascribed to his eccentricities.

Dr. Elbert died at Keosauqua, Van Buren county, Iowa, on the 28th of March, A. D., 1865, after an illness of three weeks. His brethern of the masonic order, together with a vast throng of his brethern in the Lord, performed the last sad rites and solemn services of religion, in a manner befitting his name and fame, and in silence deposited his remains beneath the cold clay from whence it sprang.—by Prof. A. M. Carpenter, M. D.

Henry Courtney, M. D., of Des Moines.

Dr. Courtney was born in Mason County, Kentuky, in 1813. and died in Des Moines, Iowa, in June 1861. Having received as good and thorough a common school education as was afforded at that early day, he resolved to adopt the profession of medicine as the business of his future life, the study of which he pursued under Dr. C.

Call, of Georgetown, Ohio. Was married and commenced the practice of medicine in 1844. Having had the misfortune to lose his wife, he removed to Bluffton, Indiana, where he married a second time in 1846, and was elected to the office of county treasurer of Wells county, which office he filled to the complete satisfaction of his constituents for about three years. In the winter of 1849 and 1850, he attended a course of lectures in the medical college of Ohio, and received from that institution the degree of Doctor of Medicine. He continued in the practice of his profession at Bluffton, until his removal to Des Moines, Iowa, in 1853, where he gradually acquired the confidence of the people and a respectable patronage.

His last illness was of but a few days duration, was attended with persistent vomiting, constipation, and paroxysms of intense pain in the right hypochondrium. Dr. Courtney thought there was intussusception of the intestines, and his attending physicians were unable to determine satisfactorily the true nature of his malady until an autopsy revealed a biliary calculus measuring three-fourths of an inch in diameter, firmly impacted in the common duct, producing an inflammation which soon propagated itself to contiguous parts, and ending in death.

Dr. Courtney was possessed of rare social qualities, dignified and pleasing in his address, and in his intercourse with his professional brethern he was generous, affable, and courteous.

In 1859 he was elected president of the Polk County Medical Society, and up to his death continued to be one of its most active and useful members. Dr. Courtney loved the profession, and evinced in his studious habits, as well as in his careful examinations of whatever related to its advancement, a laudable ambition to excel in the exercises of the highest professional acquirements, and in the estimation of the profession, as well as that of the public, he had already attained, in some degree, to that position to which he aspired, and to which he was so eminently entitled.—by A. G. Field, M. D.

John G. House, M. D., of Independence.

Dr. House was born in Madison county, New York, April 26, 1816, and consequently was nigh sixty-four years old at the time of his death. When quite young, his father removed with the family to Springville, Erie county, where at the age of sixteen he entered the academy where he remained three years, and then entered the office of Dr. Carlos Emmons, and commenced the study of medicine. Subsequently he was for a time a private student of Prof. Austin Flint, then of Buffalo, New York. His first course of lectures was taken in Jefferson Medical College, Pennsylvania. The degree of M. D. he took at the Columbia Medical College, D. C., in 1841. Returning to his home in Springville, N. Y., he commenced practice with his preceptor, Dr. Emmons, the partnership continuing fifteen years. He then removed to St. Louis, Missouri, where he remained one year.

Here he buried a son and becoming discouraged he returned to New York, locating at Buffalo, where he practiced about one year, then came to Iowa, taking up his residence at Independence in 1861. About one year after coming to Iowa his wife died.

A member of this Society for eleven years, he was twice on committies to procure the passage of a law regulating the practice of medicine. He was vice-president of the Society in 1874. In his own country he had served as supervisor for three years and had recently been re-elected to the same office. He was at the time of his death, and for several years past, a trustee of the Insane Asylum at Independence. He was the first president of the Buchanan County Medical Society. Though a great worker and always interested in public affairs, and bearing a full share of its burdens, he never neglected his professional duties. His last prescription was made not twenty hours before his death.—by Geo. Warne, M. D., of Independence.

Typhoid Vaccination in the French Army.

Official statistics show that in France no case of typhoid fever has occurred among the soldiers vaccinated, who, on December 31st, 1912, numbered 37,140. Only one case was reported among 13,290 men vaccinated in Algiers-Tunis, and that was a soldier who had come from Morocco. In Morocco the results were: in Eastern Morocco the morbidity and mortality were nil, while among the non-vaccinated the morbidity was 38.23, the mortality 5.51 per 1,000. In Western Morocco the morbidity among the vaccinated was 2.96, the mortality 0.09 per 1,000: while among the nonvaccinated the morbidity was 168.75 and the mortality 21.29 per 1,000. Taking the average typhoid statistics for the whole army, it is estimated that anti typhoid vaccination has, among the 62,788 men treated, prevented 2,101 cases of the disease and 266 deaths during the year 1912.—(The American Practitioner.)

Death of Professor Reclus.

Professor Paul Reclus, the noted surgeon, died in Paris, France, on July 29th, in his sixty-eighth year. Professor Reclus was born at Orthez in the Lower Pyrenees and was educated at the College of Sainte-Foy-le-Grande and the Lyceum of Nimes. He was an officer of the Legion of Honor, professor of the Surgical Clinic of the Faculty of Medicine of Paris, surgeon in chief to the hospital of the Hotel Dieu, a Counselor General of the Lower Pyrenees, and a former mayor of Orion. Of his notable surgical works, the most recent is one on the use of cocaine in surgical operations.

(It was our privilege about a year ago to hear Professor Reclus lecture on the subject of Local Anesthesia at the Hotel Dieu. The Professor was a very enthusiastic advocate of local anesthesia and believed that a large part of our surgical work could be done under this form of anesthesia. Editor).

Responsibility for Malpractice of Partners and Substitutes.

(Lee vs. Moore (Tex.), 162 S. W. R. 437.)

The Court of Civil Appeals of Texas in reversing a judgment obtained by the defendant and ordering a new trial, says that if a physician

makes provision for the attendance of a competent physician on his patient, he may leave temporarily, but for the unwarranted abandonment of a case at a critical period resulting in increased pain and suffering on the part of the patient, he will be held liable in damages. In this case the question was as to the liability of a physician for the malpractice of a substitute furnished by him.

The plaintiff had arranged with the defendant to attend his wife in childbirth. One night the defendant was summoned, pronounced the pains false, and went home. When called again next morning by telephone, he replied he could not come, but would send another physician, a Dr. Hardin. The court is of the opinion that, even though it should be conceded that common carriers in furnishing a physician to treat injured passengers, etc., and persons rendering gratuitous services in employing a physician to attend on a sick or injured person are only required to exercise ordinary care to select a skilled and competent physician, yet, under the facts of this case, the duty of the defendant to furnish the plaintiff a physician to attend on his wife possessing that degree of knowledge, skill, and care which physicians practicing in that city and vicinity possessed, was absolute. If it could be said that Dr. Hardin was not an assistant of the defendant in the treatment of the plaintiff's wife, and was not a general partner of the defendant in the practice of medicine, yet that he was a special partner in the treatment of the case, or was acting under his employment to do so, could not very well be gainsaid. At any rate, the defendant, being a physician himself, and having by contract undertaken the treatment of Mrs. Lee, and having secured the services of Dr. Hardin to relieve himself of the necessity of attending her himself and to serve his own interests, the defendant would not be allowed to say that, in such case, the duty resting on him in the selection of a substitute physician was simply that of ordinary care.

Whether the plaintiff was under the influence of intoxicating liquors and exhibited a pistol in such a threatening manner towards Dr. Hardin while he was waiting on the plaitiff's wife as to alarm or excite Dr. while he was waiting on the plaintiff's wife as to alarm or excite Dr. any, of the physician to use ordinary care and skill in the treatment of the plaintiff's wife, was an issue made by the evidence, which should have been submitted to the jury for their determination, with instructions that an affirmative finding on it would entitle the defendant to a verdict in his favor.

(The Journal of the American Medical Association.)

No More Typhoid in the Army.

Typhoid fever has been banished from the United States Army. In the entire enrollment of over 90,000 men in barracks or camps in the United States, Philippines, China, Porto Rico, Cuba and Hawaii, there were during 1913 only three cases of typhoid fever. Two of these were new recruits who developed the disease four and five days after they enlisted. Only a single case of typhoid fever in an inoculated soldier occurred during the entire year out of the entire body of 90,000 men. This case occurred in a soldier in the batalion on duty in China. All three of these cases recovered, so that not a single death in the Army during the year resulted from this disease. When it is remembered that typhoid has been for centuries the most dangerous disease to the soldiers and that every army, whether on garrison duty or in the field, has expected to pay a heavy toll of sickness and death to this disease, the record of our troops is all the more remarkable. The disappearance of typhoid is due directly to typhoid vaccination, which has been practiced in the Army since 1909.

Previous to the introduction of vaccination the best record which had been obtained by sanitary precautions was in 1908, in which out of 74,-692 men, there were 239 cases of typhoid with 24 deaths. Vaccination, begun in the Army in 1909, was at first voluntary, but later was made universal. In 1910, with 81,434 officers and men in the Army, there were 198 cases of typhoid with 14 deaths. In 1911, with 82,802 men in the Army, there were 70 cases and 8 deaths. In 1912, with 88,478 men enrolled, there were only 27 cases and 4 deaths, while in 1913, with 90,-646 officers and men in the Army, there were 3 cases and no deaths, and as has been shown above, two of the three cases were in recruits who had just joined the Army. As the sanitary conditions, food, water and all the surroundings were practically the same in 1913 as in 1908, the only cause for such a remarkable record is the general enforcement of typhoid vaccination. These startling and gratifying facts are from an article by Major F. F. Russell in a recent issue of The Journal of the American Medical Association.

Sore Eyes Caused By Face Powder.

Face powder has its dangers the same as gunpowder. For several years occasional cases have come under the observation of oculists in which the patients, invariably women, complain of vision being blurred, inability to use the eyes for any length of time and severe itching of the lids. The slightest rubbing of the lids produces a marked redness of the eyes and only aggravates the itching. In severe cases the lids are frequently swollen from constant rubbing. There is a sticky, elastic secretion which, when being removed, pulls out in long strings. Microscopic examination of the secretion reveals masses of what appear to be crystals. Until recently no satisfactory explanation of the presence of these crystals in the eye has been given. Secretion taken from the eyes of two sisters suffering from this peculiar complaint were submitted to the professor of pathology of one of the university medical schools, who found that the crystals came from rice face powder. Seven other patients in which the same symptoms and microscopic conditions were found all used the same make of face powder. When the powder is applied to the face with a puff a portion of the fine dust is driven upward and lodges on the moist eyeball. The rice powder in the presence of the tears then becomes mucilaginous in character and is not washed from under the eyelids. The powder produces the irritation, which is aggravated by rubbing. Those who use a chamois-skin in applying the powder are less liable to cause the fine dust to rise, which probably accounts for the condition not being found in every woman using face powder. The condition is quickly relieved by flushing the eye with boric acid solution. The irritation rapidly disappears when the eyes are kept washed out with a soothing eyewash.

Typhoid Disappears in the Army.

During 1913 typhoid fever has practically been eliminated from the United States Army. What this means can be appreciated only by those who know the varied conditions under which these men live. About ninety thousand soldiers are scattered over the Philippine Islands, Oahu in the Hawaiian group, Northern China, Panama, Alaska and the United States proper. About twelve thousand have been living under canvas in camps in Texas since February, 1913. Five thousand are native Filipinos living in the Islands.

In a recent issue of The Journal of the American Medical Association,

Major Russell of the Army Medical Corps gives an account of the disappearance of typhoid in the Army. Only one case of typhoid fever in an inoculated soldier occurred during 1913, out of 90,000 men. The case occurred in the batallion at Tienstin, China. Two cases in this country occurred in recruits of four and five days' service, respectively, who had not been inoculated at the time they were taken sick.

The United States Census for 1900 gives the average typhoid death-rate as 16.5 per hundred thousand inhabitants. Rosenau states that in this country "there are comparatively few communities of 1,000 inhabitants or more, which, during any period of twelve consecutive months within the last decade, have been entirely free from typhoid fever. In 1908, the death-toll from typhoid fever was no less than 35,000 in the United States. In other words, one person in 200 contracted typhoid fever that year." This would mean at the 1908 rate, 450 cases in the Army at its present strength.

The disappearance of the disease is due to inoculation of all recruits as they enter the service. The general sanitary condition of the posts for the past few years is maintained at the same level, but it must be recalled that soldiers on entering the Army by no means lose touch with civil life. They participate in all features of civilian life, just as any other travelers or visitors, and so are exposed to the same chances of infection that civilians incur. The fact that a population of ninety thousand at a most susceptible age has practically no typhoid can be accounted for only by the immunity conferred by the prophylactic inoculation. The extension of this measure to certain phases of civil life is definitely indicated for adolescents who have not had the fever, in the presence of an epidemic, or for those leaving their homes for travel or for life in the country. Is there no value in this procedure to railroads and other industrial concerns that employ armies of skilled labor, as well as to the individual on farms and railroads whose family is dependent on his manual labor for livelihood? The way has been shown for reducing greatly the three hundred thousand cases per annum in this country by a procedure causing less inconvenience than vaccination.

To Compensate Federal Employees for Occupational Diseases.

The Kern-McGillicuddy bill to provide compensation for employees of the United States suffering accidents or occupational diseases in the course of their employment was favorably reported by the House Judiciary Committee on April 21. The bill is being urged by the American Association for Labor Legislation and is endorsed by numerous medical, labor and civic bodies. The Federal government now employs more than one-third of a million men and women, many of them in hazardous undertakings such as river and harbor work, navy yards and arsenals, the reclamation and forestry services, and in the Canal Zone. Official reports show that many of these employees are not properly protected against accidents and occupational diseases, and that the injured are compensated inadequately or not at all. One case of acute lead-poisoning causing a loss of thirty-seven days by a navy yard employee was refused compensation under the existing law because the inhalation of lead dust in his case was "a necessary incident" of his occupation, and therefore there was "nothing accidental in the injury resulting therefrom." A girl employed to fold heavy paper in the Government Printing Office contracted from continuous strain on her fingers and wrist a cystic growth which she was obliged to have surgically removed, but compensation was refused her on the ground that her incapacity was "not due to injury," but to

"excessive use." Many similar cases, including compressed air illness, could be cited.

In the matter of accidents, "fractures of an arm or leg," reports the Bureau of Labor, "have led to payments in amounts less than $25, the loss of an eye in amounts varying between $25 and $50, and in the case of the loss of a right arm the injured workman was entitled to a payment of less than $50."

The Kern-McGillicuddy bill was drawn by workmen's compensation experts after careful study. Its enactment would establish for United States employees scientific standards of indemnity in accord with those of the more progressive American states and European countries.

The governors of the New York skin and cancer hospital announce a course of clinical lectures and demonstrations in the out-patient hall of the hospital on the following afternoons, at 4:15 o'clock: Syphilis—by Dr. Bulkley. April 1, Primary lesions, genital and extra-genital—Innocent syphilis. April 8, Early manifestations of syphilis. April 15, Late manifestations of syphilis. April 22, Martial and hereditary syphilis. April 29, Treatment of syphilis. Cancer—by Dr. William Seaman Bainbridge. April 30, Some practical phases of the cancer problem. The lectures will be illustrated by cases, models, colored plates, photographs, etc. The course will be free to the Medical Profession, on the presentation of their professional cards.

The Physicians of Germany in 1913.

According to Professor Schwalbe's Medical Directory for Germany for 1914, the number of physicians in Germany in 1913 was 34,136. Compared with the population, 66,835,000, this gives 5.11 physicians per 10,000 inhabitants. About 100 physicians must be subtracted who practice at the health resorts in summer and other cities in winter, and therefore are reckoned twice. The number of physicians in Germany has increased since 1901 from a proportion of 4.92 to 5.11 per 10,000 inhabitants. In addition, there are 168 ship surgeons and 163 physicians in the German colonies. About 500 physicians are lost in Germany annually through death and emigration. The number of licenses and the number of medical students is continually increasing. In 1916, 2,000 young physicians may be expected to enter the profession. The physicians are usually numerous in the large cities, the proportion being 9.6 per 10,000 inhabitants in the large cities with a total of about 15,000,000 inhabitants as compared with 3.8 per 10,000 inhabitants in the rest of Germany with a total popuplation of over 51,000,000. It is estimated that there are in greater Berlin 11.09 physicians per 10,000 inhabitants. Wiesbaden has 28 physicians per 10,000 inhabitants, while the town of Hamborn has only 2.3. The number of women practitioners is steadily increasing, there being 151 in 1912 and 195 in 1913. They prefer to settle in the large cities. A similar increase is observed in the number of specialists.

Medical Education Statistics for 1914.

The Journal A. M. A., August 22, 1914, the annual Educational Number, contains statistics of medical colleges, students and graduates for the year ending June 30, 1914. There were 16,502 students studying medicine this year, 513 less than in 1913. These are divided into 15,438 in the non-sectarian colleges, 794 in the homeopathic colleges, and 270 in the eclectic colleges.

There were 3,594 medical graduates this year, 387 less than in 1913, and 889 less than were graduated in 1912. The non-sectarian colleges

had 3,370; the homeopathic had 154 and the eclectic had 70. This is the lowest number of graduates since 1890.

There are six less colleges than in 1913, the total now being 101, consisting of 87 non-sectarian, 10 homeopathic and 4 eclectic colleges.

Since 1904, 85 medical schools have been closed, 49 of which were merged into other medical schools and 35 became extinct. During the same time twenty-four new colleges were organized, making a net reduction of 61 colleges. This reduction in the number of medical schools is not restricting the opportunities of students to study medicine but is insuring them a better training. The large over-supply of medical schools in this country, is giving way to a more normal supply of better equipped colleges. Of the 85 colleges which closed, 62 had been rated in Classes B and C by the Council on Medical Education of the American Medical Association. A large majority of those closed, therefore, were inferior colleges.

The marked reductions in the numbers of medical colleges, students and graduates is the reaction which would naturally follow the stupendous over-supply which this country possessed ten years ago. There would be no possibility of a scarcity of physicians in this country for years to come, even though the number of medical schools was again reduced by half.

Women students constituted 3.8 per cent. of all students, and of all graduates, 3.4 per cent. were women. Statistics show that college terms are being gradually lengthened. In 1901, 100 colleges had annual sessions of only 23 to 28 weeks each. Now only two colloges have such short sessions and about 95 per cent. have sessions of from 31 to 36 weeks. In 1904 only 42 per cent. of the colleges had sessions of 31 or more weeks.

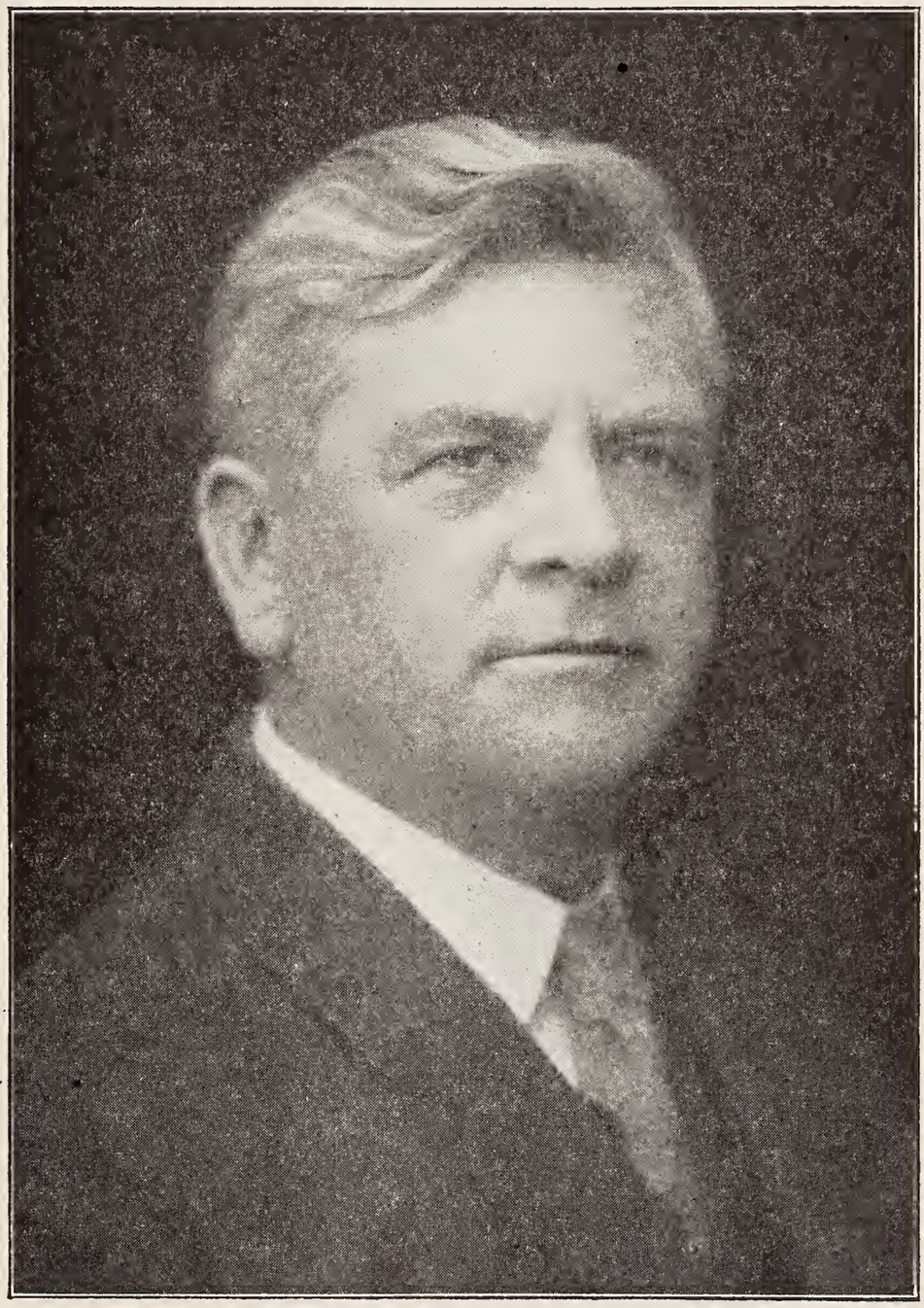
Tabulated statistics of college fees, including matriculation, tuition and laboratory fees, show that 14 colleges charge $100 or less for each student per year, 66 colleges charge between $100 and $175 per year, and 21 charge $175 or more. Among the colleges charging fees of less than $100 are several strong state university medical colleges. On the other hand eleven colleges listed by the Council in Class C charge fees from $100 to $175 per year for each student. Considering the fact that diplomas from Class C colleges are reported as not recognized as a qualification for a license by thirty-one state licensing boards it would be poor economy to attend one of these colleges because of the slight difference in fees charged. In some cases it is a fact that in the same time and for even less money the student could attend one of the best equipped colleges, the diplomas of which are recognized in all states. Financial reports from 65 acceptable medical schools show an average actual expenditure for each student for one year of $435 while each student paid on the average in fees only $122. This shows that to furnish an adequate training medical schools must have more income than is derived from students' fees, in the form of either state aid or private endowment.

Of the 101 existing colleges, 84, or over, 83 per cent. now require one or more years of work in a college of liberal arts for admission, and several others have announced the higher requirement to take effect in 1915. Of this number, 34 require for admission two or more years of collegiate work. That marked progress in this respect has been made, is shown by the fact that in 1904 only 4 colleges (less than three per cent.) require any collegiate work for admission. Twenty state licensing boards have established the requirement for preliminary education of one years' work in a college of liberal arts, thereby supporting the better class of colleges which have adopted that standard. Seven of these require two years of collegiate work, the equivalent to that required by university medical schools for the six year combined course for the B. S. and M. D. degrees.

Of the 3,594 medical graduates in 1914, 807 or 22.5 per cent. were

also graduates of colleges of liberal arts as compared with 19 per cent, last year. This shows a decided improvement in the qualifications of those who are to practice medicine.

In recent years medical colleges have been greatly improved by the securing of endowments, new buildings, better equipped laboratories, better dispensary and hospital facilities and—most important—larger numbers of expert, full-time teachers. Improvements have been particularly rapid since the creation by the American Medical Association of the Council on Medical Education, in 1904.



An interesting feature at the Alumni Banquet of the Iowa State University was the presentation of a loving cup to Dean J. R. Guthrie of the College of Medicine, on the completion of his twenty-five years of active service as a Professor in the University.

Dr. R. E. Conniff of Sioux City made the presentation speech, which closed with the following words:—

"And now, Dean Guthrie, it is with a great satisfaction and pleasure that I present you, in behalf of your former students and as an expression of their confidence in you as a man: their appreciation for the work you

have done; their gratitude for the influence you have had, and as a pledge of their fidelity and their love, this beautiful cup with the inscription—

PRESENTED TO

JAMES RENWICK GUTHRIE

By his former students
On the completion of his twenty-fifth year as a
Professor
in the
COLLEGE OF MEDICINE,
at the
STATE UNIVERSITY OF IOWA
June 17th, 1914.

Dr. Guthrie responded in his usual felicitous manner to the sentiments expressed as follows:—

"Friends, I have no words which can properly express the feelings I entertain at this moment. I have no words to adequately express to you, my former students, my sincere appreciation for this gift. It is beautiful; but its beauty does not approach the beautiful sentiment of the feeling of friendship that extends through a quarter of a century. It is valuable, but it does not approach in value a one-thousandth part, that of the sentiment of friendships of my students of the last twenty-five years—the feeling of friendship, of love, that prompted this beautiful gift. That is imperishable. This beautiful gift may be tarnished or destroyed, but the love and inspiration of the students from that June time in '89 until this afternoon is something I will remember and treasure throughout my life, as a sentiment which is everlasting.

Ladies and gentlemen, you have listened to some eulogy by a friend. You have been told that for twenty-five years I have acted as professor in the university. That is true, but I want to tell you, and tell you frankly, that there are others to whom I would pay tribute. First, it would have been impossible for me to have accomplished the work which I have done, had it not been for the inspiration and encouragement of my devoted wife, who, with me will treasure this beautiful gift. Second, the few things which I have accomplished in the University of Iowa, would have been absolutely impossible had it not been for the hearty co-operation of the loyal band of men and women with whom I have been associated since '89. Third, to realize my ideals would have been impossible had it not been for what I could always depend upon in the alumni when we were in need, the uniform loyalty of the sons and daughters of "Old Gold". It is one of the great assets of the university.

My former students and fellow alumni, I thank you for this expression of appreciation and good will. In accepting it, I am sure that I can bespeak for the institution, for the upbuilding of which I have devoted myself these many years, your most loyal support.

Till the waters no more in thy river shall run,
Till the stars in the heavens grow cold,
We shall sing of the glory and fame thou hast won
And the love that we bear for Old Gold."

The other speakers on the toast program were as follows: Charles H. Clarke of Des Moines, president of the University of Iowa Association, toastmaster; Hon. D. D. Murphy of Elkader, chairman of the Board of Education; Miss Unda Hamren, Kansas City; Dr. James Alexander Macdonald, the Commencement orator; Miss Sadie G. Holiday of Burlington; and Thomas Huston Macbride, president of the University of Iowa.

Modern Surgery, General and Operative. Seventh Edition. Revised. Enlarged and Reset. By J. Chalmers Da Costa, M. D., Samuel D. Gross, Professor of Surgery Jefferson Medical College, Philadelphia, Pa. Octavo of 1515 pages with 1035 illustrations, some of them in colors. W. B. Saunders Company, 1914. Cloth $6.00 net. Half Morocco $7.50 net.

This appears to be the most popular work on surgery published in this country. In something like twenty years seven editions have been issued and each edition has been for the most part rewritten and enlarged. A comparison of these issues very closely marks the advance of surgery. The volume before us has grown greatly over the last edition (6th) and the time had come when it was necessary to reset the entire work, and to keep the book within bounds the pages were made a little longer and broader. The publishers tell us that 250 pages have been added in this way without increasing the number of pages in the book. To review a book like this would be a difficult undertaking. Therefore we look for some particular thing which may be looked upon as a fair index of the whole work. As a general surgeon, we select the chapter on fractures which is very satisfactory and entirely in accord with the best that has been written. On the subject of the open treatment the author formulates the rules laid down by the great authority on fractures, Mr. Jones of Liverpool. "Operate primarily for fractures of the patella; fractures of both bones of the leg in the lower third; most fractures of the os calcis; some cases of Potts' fracture; most fractures of lower third of the femur; some fractures of the neck of the femur in the young and middle aged; fractures of the olecranon; some fractures of the elbow joint; some fractures of both bones of the forearm; some fractures of the metacarpus; fractures of the zygoma; some fractures of the mandible; some fractures of the clavicle; in many comminuted fractures if any important nerve or blood vessel has been divided. Most children are manageable by conservative methods and do not do as well as adults after operation.

The author is a little more conservative than some writers on the use of the x-ray, and is not quite in accordance with the rulings of our Supreme Courts.

Diseases of Bones and Joints, by Leonard W. Ely, M.D. Associate Professor of Surgery, Leland Stanford Junior Univ., San Francisco, Cal. Sextodecimo: 220 Pages, 94 Illustrations. Surgery Publishing Co., New York. Price, Cloth, $2.00.

The unusual interest now manifested by the profession in acute and chronic arthritis, as well as other forms of bone and joint diseases makes this book particularly timely.

Prof. Ely is particularly well equipped from experience to present an authoritative work, having specialized in this particular branch of surgery for years.

This book is intended primarily for the general practitioner, but instead of furnishing that long suffering and very important person with a mass of details, and with many methods of treatment from which he may choose, the book lays down broad general principles, with the evidence upon which they are based, and then shows how these principles may be applied.

In a brief terse way, it presents the anatomy, physiology and pathology of bones and joints, acute and chronic arthritis of various types, ankylosis, diseases of the shafts, acute osteomyelitis, chronic inflammations in the bone shafts, new growths in bone, etc.

In the present condition of requiring the doctor to be up-to-date in his treatment of lesions of bones, this book will be of material value to the busy physician.

Blood Pressure in Medicine and Surgery. A Guide for Students and Practitioners. By Edward H. Goodman, M. D., Associate in Medicine in the University of Pennsylvania. 12 mo., 226 pages. Illustrated. Cloth $1.50 net. Lea and Febiger, Publishers, Philadelphia and New York, 1914.

The importance which blood pressure has come to have in diagnosis in certain conditions has created a demand for the best information obtainable on the exact value of the sphygmomanometer how to use the instrument and how to eliminate elements of error.

Two works, one by Faught and the one by Goodman are opportune in their appearance and should be carefully considered by everyone who uses blood-pressure instruments. The little book under review has everything to recommend it. The author has balanced the subjects in such a way as to give the most careful and fullest attention to the subjects of the most importance and upon which the most accurate knowledge has been obtained.

We most heartily recommend this book to the profession.

Guiding Principles in Surgical Practice by Frederick-Emil Neef, B.S., M.L., M. D. Adjunct Prof. of Gynecology, Fordham University School of Med., New York City. Sextodecimo; 180 Pages. Surgery Publishing Co., New York. Price, Cloth, $1.50.

The author answers herein some of the questions which present themselves to the general practitioner and surgeon, particularly in the beginning of his career, during the period in which he formulates for himself the rules that are likely to direct him in his future work.

The viewpoint is based on clinical studies in the operating room and at the bedside of the patient. The book covers the practical points in the preparation of the patient for an operation, the arrangement of the operating room, the important relations between the surgeon and his anesthetist, the assistant, the family physician, the nurse during the course of the operation, also the after care of the case.

This is a very practical and convenient book. Marginal indexes in red greatly facilitate reference.

Special Anesthesia Supplement.

Recent years have been marked by some important contributions to the theory and especially to the practice of surgical anesthesia, but there has lacked what is now quite needed for the further scientific development of this alongside the other departments of surgery—a journalistic medium and editorial mouthpiece.

The American Journal of Surgery will be expanded to meet this need. Beginning with the October issue and quarterly thereafter, this ournal will publish a 32 page supplement devoted exclusively to Anesthesia and Analgesia.

The supplement has been adopted as the official organ o fthe American Association of Anesthetists and the Scottish Society of Anesthetists and it will also publish the transactions of other like societies.

The editor of this supplement will be Dr. F. Hoeffer of McMechan of Cincinnati, one of the founders of the American Association of Anesthetists and a charter member of the New York Society of Anesthetists.

Boy Born to Dr. Tiffany, Kansas City.

When an eight-pound boy arrived at the home, 100 Garfield avenue, August 10, 1914, Dr. Flavel B. Tiffany announced that Dr. Wiley would

have to give up the blue ribbon he has been claiming in the prize baby contest. Dr. Tiffany, who is 68 years old, was married September 12, 1912, after which he and his bride made a trip around the worlld. Thirty-four years ago on July 10, a boy was born to the first Mrs. Tiffany, but it died in infancy. The newcomer is to be known as Flavel B. Tiffany III.

DEATHS.

Dr. Chas. H. Preston, a member of the Scott County and Iowa State Medical Societies, and of the American Medical Association, died at his home in Davenport, Iowa, May 21st, 1914. Aged 69 years. Dr. Preston was a graduate of the Iowa State University, in Liberal Arts, in 1870 and in the department of Medicine in 1873. He practiced his whole professional life in Davenport, where he was prominently identified with the best agencies for the advancement of the interests of the City.

Propaganda for Reform.

Lower's German Prescription.—This "consumption cure," hailing from Marion Ohio, is sold under the claims: "The most Deadly Foe to the Great White Plague—Tuberculosis—Science Has Yet Produced," "it takes from 15 to 30 large bottles of German Prescription to remove the tuberculosis poison," each bottle costing the victim two dollars. The composition of the nostrum is purported to be (in bastard Latin): "Herb Menthaepeperitae, Herb Marrubium Vulgarae, Ex Balsanum Tolutonum, Herb Hydrastis Canadensis, Scillae Martinia, Mentholis, Ex Virginianna Prunus, Ex Capsici Fastiagratum." An examination made in the A. M. A. Chemical Laboratory indicates that whatever therapeutic virtues this peppermint-horehound-cayenne pepper-menthol mixture possesses are due to the 1.83 gm. menthol per 100 c. c. which it contained. About the only effect produced by the mixture will be to derange the digestion of the person taking it. (Jour. A. M. A., May 2, 1914, p. 1418).

The Okola Laboratory.—The postmaster general has issued a fraud order against the Okola Laboratory, Inc., Rochester, N. Y., which sold a mail order treatment for weak eyes. The "laboratory" advertised that Dr. John L. Corish "an able New York physician" and "an eminent medical man" had discovered a marvelous treatment for affections of the eye by which those who were wearing glasses or who should have been wearing glasses would do without them. The treatment consisted of three parts. Okola was the name of some tablets proven by the government to consist of baking soda and boric acid. The Okolator was a metal inhaler containing cotton moistened with a volatile liquid. The Okolizers were printed cards giving instructions for rubbing the eyes, etc. (Jour. A. M. A., May 9, 1914, p. 1492).

Pancreatin.—Long and Buhleman report that mere traces of hydrochloric acid and will destroy the ptyalin of pancreatin, that pancreatin of commerce—which often is not pancreatin but merely the dried pancreas gland—is practically devoid of lipase, the fat digesting ferment, and that its tryptic ferment is likely to be destroyed by the action of the pepsin and hydrochloric acid during its passage through the stomach. (Arch, Int. Med., Feb. 1914, p. 314).

Bromidia (Battle and Co.).—A report of the Council on Pharmacy and Chemistry points out that while the name suggests bromid, Bromidia is essentially a chloral preparation. This nostrum illustrates the need of the Council's rule under which recognition is refused to pharmaceutical mixtures whose name does not indicate their most potent ingredients. While the chloral content of Bromidia has been given considerable publicity, yet the preperation is used both by physicians and by the public,

without due consideration of its potent ingredient, as attested by the fatal results and the habit-formation which have resulted from its use. The Bromidia advertising propaganda first admits the presence of chloral, then it is argued that in Bromidia the evil effects of chloral are eliminated and in the end the impression is left that Bromidia is practically innocuous and may be given even in cases of typhoid and to children. (Jour. A. M. A., May 16, 1914, p. 1573).

Monte Cristo Rum and Quinin for the Hair.—The government chemists found this preparation to contain ethyl alcohol, wood alcohol and a trace of quinin. The manfactures were found guilty of adulteration and misbranding the preparation. (Jour. A. M. A., May 16, 1914, p. 1575).

Pepsin Magen Bitters.—The government chemists found this preparation to contain only a trace of pepsin. The preparation was declared misbranded. (Jour. A. M. A.,May 16, 1914, p. 1575).

Bavarian Malt Extract.—The government chemists proved that this was not a malt extract coming from Bavaria, but instead was beer. The product was declared misbranded. (Jour. A. M. A., 1914, p. 1575).

Thiocol Re-admitted to N. N. R.—In 1913 the Council on Pharmacy and Chemistry directed the deletion from New and Nonofficial Remedies of Thiocol and Syrup Thiocol, Roche, because a preparation called Sirolin, containing Thiocol as its effective component and practically the same as Syrup Thiocol, Roche was being advertised to the public. The Hoffmann-LaRoche Chemical Works having furnished assurance that the public exploitation of Sirolin has been discontinued, the Council voted that Thiocol and Syrup Thiocol, Roche be restored to New and Nonofficial Remedies. (Jour. A. M. A., May 23, 1914, p. 1637).

Antimeningitis Serum.—The untoward or fatal effects sometimes following the use of antimeningitis serum are probably due to the toxic action of the preservative contained in it or to increased intracranial tension due to its administration. The technic of its employment should be improved rather than its use abandoned. The dangers which may arise from its use are not to be feared as much as the disease itself. (Jour. A. M. A., May 23, 1914, p. 1661).

Liquid Petrolatum or "Russian Mineral Oil."—A report of the Council on Pharmacy and Chemistry points out that petroleum oil was used as a medicine by the ancients and that the product "liquid petrolatum" is now on the market under a host of proprietary names and is official in most pharmacopeias. It was at one time used in the treatment of tuberculosis and as an adulterant of fats and oils on the assumption that it was assimilable. It is now known to pass the system unchanged and has recently been highly lauded as a particularly harmless laxative in the treatment of habitual constipation. As the U. S. P. definition of liquid petrolatum permits the use of rather widely varying products and as there is some differences of opinion whether a light or a heavy oil is preferable, the Council recommends that physicians desiring the water white, non-fluorescent (Russian) mineral oil use the term petrolatum liquidum grave or paraffinum liquidum, B. P. if the heavy product preferred by Sir F. Arbuthnot Lane is desired and petrolatum liquidum laeve if the light variety is desired. (Jour. A. M. A., May 30, 1914, p. 1740).

Cirkulon.—The device "Pulsocon" which Gerald Macauro has exploited widely in England, is sold in this country as "Cirkulon" by the "Cirkulon Institute" of Kansas City, Mo. Gerald Macauro, according to the Associated Press, has been sentenced in France to serve a term of three years' imprisonment on a charge of fraud. (Jour. A. M. A., May 30, 1914, p. 1742).

Since publication of New and Nonofficial Remedies, 1914, the following articles have been accepted for inclusion with "N. N. R."

H. M. Alexandar and Co.: Normal Horse Serum; Typhoid Vaccine, Immunizing.

Antiseptic Supply Co.: Causticks; Caustick Applicators; Cupricsticks; Stypticks.

Arlington Chemical Co.:Arlco Urease.

Comar and Cie: Electrargol.

Farbwerke Hoechst Co.: Amphotropin; Erepton.

Fairchild Bros. and Foster: Trypsin.

Franco American Ferment Co.: Lactobacilline Tablets; Lactobacilline Liquide; Culture A; Lactobacilline Liquide, Culture D; Lactobacilline Liquide, Infant Culture; Lacto Bacilline Glycogene Tablets; Lactobacilline (Glycogene Liquide); Lactobactilline Milk Tablets; Lactobacilline Milk Ferment; Lactobacilline Suspension.

Hoffmann-LaRoche Chemical Works: Thiocol; Syrup Thiocol, Roche; Thiocol Tablets.

Hynson, Westcott and Co., Phenolsulphonephthalein, H. W. and Co., Phenolsulphonephthalein Ampules, H. W. and Co.

Merck and Co.: Cerolin.

H. K. Mulford Co.. Acne Serobacterin; Anti-Anthrax Serum, Mulford; Antistreptococcus Serum Scarlantina, Mulford; Coli Serobacterin; Culture of Bulgarian Bacillus, Mulford; Disinfectant Kre los, Mulford; Neisser Serobacterin; Pneumo Serobacterin; Salicylos; Scarlatina Strepto Serobacterin; Staphylo-Serobacterin; Straphylo Acne Serobacterin; Strepto- Serobacterin; Typho-Serobacterin.

Riedel and Co.: New Bornyval.

Reinchild Chemical Co.: Phenolphthalein Agar.

E. R. Squibb and Sons: Sodium Biphosphate, Squibb; Tetanus Antitoxin, Squibb; Tetanus Antitoxin. Squibb, 5000 Units.

Wm. R. Hubbert: Diphtheric Antitoxin, Hubbert. Having been advised that Diphtheric Antitoxin, Hubbert was no longer on the market the Council directed that it be omitted from future editions of New and Nonofficial Remedies.

Riedel and Co.:Hexalet. At the request of the manufacturer the name Hexal in New and Nonofficial Remedies has been changed to Hexalet.

Yours truly,
W. A. Puckner, Secretary
Council on Pharmacy and Chemistry.

SOCIETY NOTES AND NEWS.

Program Wapello County Medical Society, 1914-1915.

The issue of this tenth annual program of the Wapello County Medical Society shows the fixed purpose of the Society to keep in the vanguard of the medical profession. Out of thirty-five papers on the last year's program there was only one physician who failed to be present and prepared with his paper. The program proved the great interest of physicians in the drugs used in our art, and brought forth some very valuable and interesting papers and discussions. Those on the program who were not members of the Society added much to the interest and success of the year's work. The sincere thanks of the Society are due them for the favors they conferred in assisting us.

With confidence based on past experience, the present program is issued. Most of this year's work is difficult because it is outside the routine. That, however, should commend it, since it is a waste of energy to

discuss the well known and obvious. Strength and development are gained by undertaking the new and difficult problems as they confront us. There is nothing pertaining to our profession which we should shrink from trying to master. And while we may not hope to be expert in every field, we should have a working knowledge sufficient to tell us when the assistance of the specialist is needed. A number are on the program who are not members of the Society, but who have kindly consented to fill out our program and make this the banner year for the Society. The eminence and professional standing of these men, together with the success which they have attained in their special lines, should commend our interest and secure for them a large attendance.

The meetings, as usual, will be at the office of Dr. A. O. Williams, and will be called to order at eight o'clock.

Officers of the Society 1914: Dr. E. G. Barton, President, Dr. E. B. Howell, Vice-Pres., Dr. J. F. Herrick, Secretary; Censors—Dr. A. O. Williams, Dr. C. E. Huband, Dr. E. T. Edgerly; Dr. S. A. Spilman, Delegate to State Society. Dr. B. D. LaForce, Alternate. Committee on Public Health and Legislation—Dr. J. A. Hull, Dr. E. A. Sheafe, Dr. H. W. Vinson.

September 8, Examination of the Chest: Percussion, H. W. Vinson. Examination of Chest: Auscultation, H. A. Spilman.

September 22, Tuberculosis, E. T. Edgerly. Tuberculosis, Treatment of, Dr. J. D. Gibson, Denver, Colo.

October 6, Chronic Pulmonary Tuberculosis, M. Bannister. Acute Pulmonary Tuberculosis, W. C. Newell.

October 20, Tubercular Meningitis, C. E. Huband. Infant, Chest Examination of, E. G. Barton.

November 3, Tumors of the Jaws, S. A. Spilman. Pyorrhea, W. C. Boone, D. D. S.

November 17, Odontomata, C. W. Harned, M. D., D. D. S., Des Moines. Faulty Dentition, C. M. Work, D. D. S.

December 1, Fractures of the Jaws, A. O. Willianms. X-Ray in Diseases of the Teeth, E. J. Wehman, M. D., Burlington.

Election of Officers.

December 15, Acute Prostatitis, E. B. Howell. Urethritis. Gonorrheal, J. C. Box.

January 5, 1915, Normal Blood Characteristics, F. W. Newell. Anenias, General Observations, D. C. Brockman.

January 19, Leukemia, W. E. Anthony. Pseudoleukemia, Maude Taylor.

February 2, Chlorosis, W. J. Herrick. Mental Diseases, Diagnosis of, Max E. Witte, M. D., Sup't. State Hospital for Insane, Clarinda.

February 16, Hemophilia, E, T, Edgerly. Neuroses, J. F. Herrick.

March 1, Pernicious Anemia, W. B. LaForce. Hcorbutus, E. A. Sheafe.

March 16, Lagrippe, J. W. Elerick. Acute Articular Rheumatism.—

April 6, Colds, C. A. Henry. Pneumonia in Children, J. A. Hull.

April 20, Lobar Pneumonia, J. B. Wilson. Pneumonia in Aged, F. W. Mills.

May 4, Co-operation, B. D. LaForce. Welfare of the Society, D. E. Graham.

Resolution Introduced and Passed at the Annual Meeting of the Sioux Valley Medical Association, July 22, 1914.

Whereas House Bill No. 6282, otherwise known as the Harrison Anti-Narcotic Bill, has passed the House and is in the Senate at Washington;

Whereas said bill as passed by the House was satisfactory to the profession;

Whereas an amendment has been offered by Senator Knute Nelson, of Minnesota, practically prohibiting physicians, dentists and veterinarians from dispensing or distributing narcotic drugs to patients by substituting the word, "administration," for the words, "dispensing and distributing," in said Bill; and,

Whereas such amendment would prevent physicians from sending, by messenger or otherwise, remedies for immediate relief when unable personally, to attend a patient on the instant; and

Whereas such restriction upon the efficiency of physicians tend to limit their usefulness to the people;

Whereas the amendment in question is evidently offered purely in the interest of dispensing druggists to the detriment of good medical service to the people;

Whereas the record feature also suggested by Senator Nelson is unnecessary and therefore a needless burden to the profession;

Therefore be it resolved by the Sioux Valley Medical Association that the Nelson amendment should be defeated in the interest of public welfare.

Resolved that a copy of these resolutions be published in the Journal of the Minnesota State Medical Association, and in the Iowa State Medical Journal, and that a copy be sent to the United States Senators and Members of Congress in Iowa, Minnesota, South Dakota, and Nebraska.

C. L. Sherman
C. S. O'Toole
D. F. Martin

Iowa and Illinois Central District Medical Association.—Report of Meeting

In annual session held at Outing Club, Davenport, on Tuesday, July 9th, 1914, the Iowa and Illinois Central District Medical Association elected the following officers for the ensuing year:

President ..... Dr.F. H. Gardner, Moline
Vice-president ..... Dr. Charles S. Young, Geneseo
Secretary ..... Dr. L. W. Littig, Davenport
Treasurer ..... Dr. F. H. First, Rock Island
Reporter ..... Dr. W. D. Chapman, Silvis

Applications for membership were heard from Doctors A. T. Leipold, Moline; H. B. Fitzjerrell, Geneseo; D. J. McCarthy, Davenport; and L. F. Newbern, Grand Mound.

Upon motion the society paid tribute of respect to the memory of member Carl Matthey of Davenport, who had died on the day previous; the recognition enacted being a stand with bowed heads through a silent half-minute. The members of this society were requested to meet Friday afternoon with members of the Scott County Medical Society for the purpose of attending in a body, the funeral of Dr. Matthey.

Announcement was made of a special meeting to be called later in the summer, at which time Dr. W. J. Mayo of Rochester, Minn., will favor the society with his presence and with a paper, the subject of which will be made known later.

Dinner at five o'clock was enjoyed by about forty members and guests and was fully up to the club's usual excellent standard.

Program of the Afternoon.

1, Chronic Intestinal Stasis with Reference to the Use of Paraffin Oil, Dr. H. A. Beam, Moline. (Classification of the three causations of intestinal stasis, and identification of the group for which paraffin oil meets indications: conclusions.)

2, Notes on Some Recent Investigations of the Streptococcus Group, Dr. J. D. Blything, Bettendorf. (Excellent resume of recent work of Dr. E. C. Rosenow with some descriptions of laboratory technic of choice.)

3, Pott's Fracture by Inversion and Report of Two Cases,Dr. E. B. Gilbert, Geneseo. (Most frequently met pathology: disscussion of fixation methods, making particular mention of Achilles tenotomy as an aid to coaptation and fixation in selected cases: case reports, including one complicated by gas baccillus infection.)

4, The Cause and Prevention of Abdominal Adhesions, Dr. A. M. Pond, Dubuque. (Pond holds very many post-operative adhesions to be preventable and lays special stress upon the perniciousness of improper sponging and of poorly-chosen drains.)

5, The Treatment of Puerperal Fever, Dr. H. M. Stowe, Chicago. (Stowe emphasized the futility of mutilating a harassed uterine wall in any attempt to overtake a fast-burrowing infective agent: describes treatment of patient.)

6, Syphilis of the Aorta, Dr. Robt. B. Preble, Chicago. (Preble states syphilis of aorta to be more common than any of the usually recognized "post-syphilitic" conditions: describes syndrome: elucidates prognosis.)

7, President's Address, Dr. P. A. Bendixon, Davenport. (Timely and suggestive for members.)

The Southern Iowa Medical Society met at Corning, Sept. 10, 1914, for an afternoon and evening meeting. The following was the program:

Some Notes on Infant Feeding .....Dr. B. B. Miller, Tabor, Iowa
The Neuroses ..... Dr. J. F. Herrick, Ottumwa, Iowa
Minor Surgical Gynecology.....Dr. C. E. Ruth, Des Moines, Iowa
A Paper (Subject Not Announced)....Dr. W. F. Schmidt, St. Joseph, Mo.
Lesions of the Urinary Tract Produced by Diseases of the Genital
Tract in the Female .....Dr. A. C. Stokes, Omaha, Neb.
The Average Practitioner .....Dr. F. E. Sampson, Creston, Iowa
The New Law on Workingmen's Compensation.....
.... Dr. J. F. Aldrich, Shenandoah, Iowa
A Paper (Subject Not Anounced) ....Dr. C. S. James, Centerville, Iowa
Typhoid Fever....Officer of Marine Hospital Service, Washington, D. C.
Plates or Splints (With Demonstration)...Dr. F. A. Bowman, Leon, Iowa
Medical Inspection of School Children..Dr. L. A. Thomas, Red Oak, Iowa
Baby Health Contests as a Basis for General Health Movement....
..... Dr. Mary T. Watts, Audubon, Iowa
Practical Preventive Medicine.....A. E. Kepford, Des Moines, Iowa

B. L. Eiker, President, Leon, Iowa
Enos Mitchell, Sec., Welden, Iowa

August Meeting of the Appanoose County Society was held at Drake Free Public Library, Wednesday, August 26.

Program: Some Difficulties and Failures in the Treatment of Diarrheas in Children, Dr. H. C. Hoch. Some Difficulties and Failures Experienced in the Treatment of Fractures, Dr. E. T. Prinze. Personal Experiences in Diagnostic Failures, Dr. W. J. Fenton. Surgical Disappointments, Dr. E. E. Bamford. Operative Preparation Failures, Dr. C. S. James. Difficulties and Errors in Obstetric Practice, Dr. W. L. Downing.

The American Roentgen Ray Society will meet in Cleveland at the Hotel Hollenden on September 9th to 12th inclusive, 1914. The program promises to be of unusual interest and value, and includes a paper by

Dessauer of Frankfort, on the subject of artificial production of gamma rays; Coolidge, the inventor of the Coolidge tube, Shearer and Duanne will also read papers. The subject of deep therapy and the production of the hard rays will be fully presented and discussed. The rest of the program will be taken up by a large number of papers on general subjects. The medical profession is cordially invited to attend these meetings.

The Medical Society of the **Missouri Valley,** twenty-seventh annual meeting, Colfax, Thursday and Friday, Sept. 17-18, headquarters and meeting place, Hotel Colfax Clinics will be held in Des Moines on Saturday.

Officers: Flavel B. Tiffany, president, Kansas City; Granville N. Ryan, first vice-president, Des Moines; Austin McMichael, second vice-president, Rock Port; O. C. Gebhart, treasurer, St. Joseph; Chas. Wood Fassett, secretary, St. Joseph.

Preliminary Program:

Minor Cardiac Inefficiencies; Importance of Their Recognition, Chas. Lyman Green.

The Prevention and Operative Relief of Deformity, John Prentiss Lord.

The Treatment of Pernicious Anemia, Walter L. Bierring.

The Relation Between Radium and Surgery, D. T. Quigley.

Report of Operated Pituitary Tumor, J. B. Potts.

Gastro-intestinal Symptoms Resulting from Disease of Other Organs, J. C. Waterman.

The Physiological Basis of Surgical Practice, Daniel Morton.

The Rational Treatment of Pulmonary Tuberculosis, John W. Flinn.

Practical Management of Pulmonary Tuberculosis, John W. Peck.

The Various Forms of Streptococcus Endocarditis with specimens, Robert H. Babcock.

Chronic Backache, L. W. Littig.

The X-ray an Aid to Diagnosis in the Right Upper Quadrant of the Abdomen, A. F. Tyler.

The Treatment of Disease and Injuries of the Sacro-iliac Articulation, H. W. Orr.

Surgery of the Lung, A. C. Stokes.

Functional Testing of the Kidneys and the Newer Phases of Nephritis, A. Sachs.

Acute Perforating Ulcer of the Stomach, Symptoms and Treatment, A. I. McKinnon.

The Present Status of the Serological Diagnosis of Syphilis, Julius S. Weingart.

Paper, H. D. Kelley.

Paper, J. P. Sedgewick.

The Diagnosis of Mediastinal Tumors, Campbell P. Howard.

Clinical Day.

Saturday, September 19, will be devoted to clinics in the hospitals of Des Moines, when all those in attendance will be guests of the Polk County Medical Society. A committee, of which Dr. Granville N. Ryan is chairman, has the clinical program in charge, and it promises to be most interesting.

Changes of Location.

Dr. J. R. Winnett, formerly of Stuart, Iowa, has removed to Eldora, where he will practice his profession.

Dr. F. H. Kisor, of Kalona, Iowa, has sold his practice to Dr. Joseph Wolfe and will locate in Cedar Rapids.

Dr. C. B. Tice, of Laurens, Iowa, has sold his practice and office equipment to Dr. W. T. Webb, of Monroe, Neb.

Dr. C. W. McQuillen, of LeMars, Iowa, has purchased the practice of Dr. F. S. Leonard of Cascade, Iowa. Dr. Leonard expects to practice in Dubuque.

Dr. J. C. Davies, of Emmetsburg, Iowa, has purchased the practice of Dr. J. L. VanCorden, of the same town, Dr. Van Gorden expects to remove to Des Moines.

Medical News and Notes.

Dr. W. S. Osborn, of Des Moines, has been appointed assistant superintendent of the State Hospital for the Insane at Peoria, Ill.

Dr. M. N. Voldeng, superintendent of the State Hospital for the Insane at Cherokee, Iowa, has been appointed superintendent of the New State Colony for Epileptics, which is to be established at Woodward, Iowa.

Dr. Geo. Donohoe, superintendent of the State Hospital for the Inabriates at Knoxville, has been elected to succeed Dr. M. N. Voldeng, as superintendent of the State Hospital at Cherokee.

Dr. James R. Guthrie of Dubuque, Dean of the College of Medicine, of the Iowa State University, resigned July 16th, 1914 and Dr. Lee Wallace Dean, of Iowa City, was elected to succeed him and Dr. Guthrie was made Dean Emeritus.

Marriages.

Dr. C. A. Biebesheimer of Reinbeck to Miss Freda Dora Wille of Iowa City, at Iowa City, June 25th, 1914.

Dr. J. L. Reeves of LeMars to Miss Mable McDonald, of Morningside, Sioux City, Iowa, at Sioux City, June 18th, 1914.

Dr. Carl M. Post to Miss Pauline Hearsham, both of Des Moines, June 30th, 1914.

Dr. A. S. Hague of Fairfield to Miss Pearl Wire of Kinsley, Kansas, at Kinsley, Kansas, July 6th, 1914.

Dr. J. H. Mason to Miss Florence Smith both of Waterloo, at Clear Lake, July 1st, 1914.

Dr. E. J. Lambert of Ottumwa to Miss Melissa Wilson of Capac, Mich., at Capac, Mich., August 25th, 1914.

Dr. T. J. Houlihan of Ida Grove to Miss Gertrude Masterson, of Chicago, at Ida Grove, August 24th, 1914.

Births.

Dr. and Mrs. G. E. Verneer of Rock Valley, June 11th, 1914, a daughter.

Dr. and Mrs. Wilbur S. Conkling of Des Moines, August 4th, 1914, a daughter.

Dr. and Mrs. H. D. Fallows of New Hampton, June 17th, 1914, a boy.

Dr. and Mrs. J. G. Rohrig, of Bennett, June 22nd, 1914, twin daughters.

Dr. and Mrs. R. W. Robb, of Blanchard, August 19th, 1914 a daughter.

Dr. and Mrs. Leslie M. Nourse, of Des Moines, August 27th, 1914, a son.

Dr. and Mrs. J. E. Edgington, of Washington, Aug. 15th, 1914, a son.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

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ADDRESS IN SURGERY

J. W. HARRISON, M. D., Guthrie Center.

It seems to be my privilege as the Chairman of the Section on Surgery, to produce something in some form or manner, relative to the foundation and the building up of the Modern Surgery of today, allowing me the exclusive freedom from all criticism or discussion.

What a great privilege this is which our worthy President and the Scientific Committee of this Society have bestowed upon its Chairman!

It reminds me of the oxydonor which is so famously advertised and known as a cure-all; while its composition and construction consist of nothing, with a wire running from nothing, and attached to nothing.

I feel as though I was the oxydonor still holding to the lower extremity of some one's human anatomy.

The liberty extended me was so great that I could range through the whole garden of medical themes searching for some appropriate subject to fit this occasion, which like the mother-hubbard, covers every thing and touches nothing.

In perparing this program there was a large degree of satisfaction to me to know that I was dealing with men; men of ability, morality, and integrity.

I assure you, gentlemen that I am very proud of the fact that we have within the bounds of the State of Iowa a few men in the medical profession of today, who are men in every sense, to which that term may apply.

As to what the modern surgeon of today should be, I might say that first of all, his physical and mental training should be the best our country affords. But the most important requisite is the

moral training,—for without the strictest morality and the most sensitive conscientiousness he will fall far short of our ideal. His nature should contain no sordid selfish streak. A broad human sympathy should be his.

On this stable foundation let him build. An education liberal and profound he should have, if possible, for no profession should be more learned and none more worthy of the title of Doctor. Let him be truly educated in science and art, and to this substantial structure let there be added his professional knowledge obtained in universities of standing and character where is furnished the true and efficient training for so important a profession. Let him constantly progress, for he should never reach a place of contentment; let him become a bachelor of medicine; let him by further effort and service become a doctor of medicine; let him become by successful service and study a doctor of surgery, always striving but never reaching the lofty ideal that should ever be his. And while striving thus to attain his ideal let him always be a man; not only a man of thought and science but a man of sensitive deep feeling and love for his fellows; a man of sternest fiber and keenest human sympathy; a man of moral force and an exponent of the best in his community, confident and sure of his own knowledge, but ever alert for truth from any source. A cultured and versatile individual, a composite of gentleness and strength, learning and simplicity, self-esteem and humility, fortitude and sympathy, a good true man, the best an accomplished eulogist and word painter might be able to picture to you.

And now that the foundation is laid, the next problem naturally develops as to his duty as a surgeon. He himself has the power of determining this very question, and his own conscience will dictate to him, as to whether or not he has the proper ability and is thoroughly capable of coping with certain operative procedures, taking into consideration his experience as well as his theory and knowledge which he has gained from the most able surgeons and men of research activity, the best our country can produce. The constant activity and energy manifested in the work, with the constant desire of wanting to do the same, becoming inspired, enthusiastic, and intensely interested at all times in his profession. He should strive to become an expert diagnostician, as surgical diagnosis is one of the most essential factors in the building up of a modern surgeon. With the proper medical training in the best of medical colleges, internship and experience in standardized hospitals with good surgeons, will give him to a certain degree the necessary training, which should be required before he undertakes his first operation. His responsibility has now begun, he manifests more confidence in his ability and originality, exercising good judgment, good reason, with deep meditation, conservation and yet acting in an expedient manner.

Again, we may say, that the advancement of modern surgery of today is due to the casting off of the garments of preconceived hypotheses of bygone ages; a contempt for philosophic dogmas and a disregard for systems of practice not founded on the observation and elucidation of natural phenomena that are governed by definite and fixed laws. These laws have been revealed to us by scientific research, so that speculation by induction had to give way to a science based on objective observation. As our science broadened and became well founded, the art of surgery became highly developed; so much so that operative possibilities appeared almost limitless.

While we have progressed in a marvelous degree during the last half century, we cannot but feel that we still have much to do. We must confess that in many ways we have only begun. There remain so many questions on which we have no light, we therefore come together often to compare our views.

One of the purposes of this Section is to record our work, to exchange ideas and to study the collective experiences of this assembly. We interrupt our daily work in order that we may come together and review our labors, to thrash out problems, to retain the useful and to discard the impractical. We aim to strengthen the underlying surgical principles and to make our practical achievements more efficient.

While modern medicine and surgery has its body of research men, whose labors have been entirely of a research and philosophic character, men whose labors have largely laid the foundations for the modern superstructure of the art of surgery, there is a large class of investigators who combine the art of their practice with laboratory research, men whose inspirations came to them during their daily labors in the operating-room and at the bedside, where practical observations are made, that sometimes, suggest certain theoretic solutions, the verifications of which are found in experimental research; this developed the practical surgeon who solved his own problems in the laboratory. Then there are those surgeons whose daily labors are so burdensome and whose time is so completely taken up with practical work that the solution of so many highly important questions is delegated to laboratory specialists. Besides there are those whose daily labors consume their energy and time to such an extent that no time is left for research work or even for thought. Their practical experiences, and many valuable observations, are lost to the profession. These men never publish or publicly discuss their methods. There are still others who fail to share the results of their experience not only because of lack of time, but either on account of lack of training in recording, classifying and analyzing their pathology, or because their interest in medicine and surgery is money-making rather than scientific. Often their profession is to them a bread-and-butter affair and not one of progressive science.

To a certain extent, what the surgeon of today needs is a return to reason. We need in our professional life sanity rather than brilliancy, and common sense rather than exploitation of operative theories. To a large degree, surgery has become more and more an exact science and its practice a highly specialized art. It became more an exact science because, like every other science, it was built up by the accumulation of unquestioned facts from contributions the world over.

The surgeon, working under modern methods, can state in percentages the chances for restoration of function and the preservation of life in a large majority of surgical cases. But there remain many conditions in which the outcome is uncertain and in which the factors of safety are not fully understood. It is for the solution of these undetermined questions that the research laboratory is indispensable and the highly trained research specialist a necessity. Surgeons who possess the highest and best skill, whose operative technic is beyond criticism, whose pathologic and diagnostic attainments are of the highest order, often men who have been pathfinders, can devote little or no attention to laboratory research, because their time is so completely absorbed with operative and hospital work and other professional duties; but their practical contributions have been of the highest value; their theoretical conclusions may have been right or wrong; only the research laboratory however, in many instances, can determine the facts.

We have a host of practical men who have developed methods of practice whose only opportunity was found in the operating-room. They had no laboratories, were not trained in research work, but they understood the problems as they presented themselves and they mastered them. They cared not for tradition, but created means that succeeded. They were pathfinders. The paths were opened and it became the duty of those who followed to elaborate and elucidate the unnumbered problems that were encountered and to solve the questions which, as surgery advanced, became more complex and more difficult of solution. The surgeon soon found that he must have to cooperate with him in his work a specially trained laboratory investigator,—in fact one whose services he found indispensable.

The laboratory worker should enter into close relation with the surgeon. He should stand beside the operating surgeon and observe and investigate the living pathologic structure as it is exposed. He should obtain a history antedating the removal of the diseased tissues, and follow the later progress of the cases in order to fully appreciate the pathology from its beginning to its end. We have too long drawn our conclusions from the findings of postmortem material, which only represents the end results.

Post-mortem examinations are of great importance. But the study of living pathology is rapidly becoming more important.

Therefore, in order that we may appreciate to the fullest extent the early tissue-changes, the investigator must cooperate closely with the operating surgeon in order that he may solve the problems for which he is especially trained. Experience has shown that cooperation in scientific work achieves the best practical results. The practical worker needs the assistance of the theoretic departments. The clinical and laboratory instruction must continue side by side and there should be a constant agreement between the two.

Again, the unsolved question of the etiology of neoplasms and their treatment is one of the greatest problems before the medical profession of today. It offers an unlimited field for work. Is cancer due to a micro-organism or a perverted metabolism? Cancer seems to be increasing and why? While questions such as these are yet unanswered, an immense amount of information has accumulated. Much positive knowledge regarding its history, distribution and development; much that is more than suggestive as to the cause, and much negative evidence as to what does not cause cancer is at hand. We have learned that cancer-cells may apparently grow indefinitely by transplantation through many generations. We have seen that cancer retrogresses under certain conditions; that there is such a condition as immunity to cancer; that cancer may, at times, gain in virulence. Experimental research seems to point to the cancer-cell as the real parasite rather than to a specific and distinct micro-organism. Family histories seem to point to heredity, but experimental research has taught us nothing.

In conclusion, allow me to say, that we are the foremost men in all this world; thus, we see, no other men under heaven can do humanity so much good as the physicians and surgeons; we deal with precious life itself—with the wasted form, the pallid cheek, the sunken eye. We see all of life's panorama from the first cry of infancy to the parting sighs of old age. Others may have the will, but they have neither the power nor the opportunity; this, with its humane nature, makes ours as noble a calling as exists on the face of the earth—a calling capable of developing all the good qualities of heart, hand, and brain.

Keep the greatness of this trust, and the responsibility and glory of our sublime and ennobling profession, and the divine command:—go heal the sick, ever in mind. Do all the good you can, to all the people you can, in all the ways you can, and remember at all times that every action, every word of your tongue, every nod of your head, quiver of your lip, wink of your eye and shrug of your shoulders, will be observed and weighed. Therefore, strive to make your manner and your methods as faultless as possible and let no word and no thought ever escape you unsuitable to the occasion.

We must surmount many of the obstacles and decide a multitude of the dilemmas that arise in the course of our professional life; and also to be able to discern the straight and noble path more clear-

ly and to follow it more bravely, more faithfully, and more successfully.

We should make skill in preventing, relieving, and curing disease our central thought and our chief reliance, and, as men and brothers, should discharge each and every duty to our Great Master's entire family, at all times, and in all places, with fidelity and honor.

BENIGN TUMORS OF THE BREAST*

OLIVER J. FAY, M. D., Des Moines.

The inauguration of the campaign to educate the profession and the public in the prevention of cancer has meant the pounding home of one important teaching: Any and every tumor of the breast is malignant until its benignancy has been completely demonstrated under the microscope. That doctrine, whether for the professional or for the non-professional man or woman, is of paramount importance, but beside it I should like to place a second tenet of great import: the criterion of malignancy is, in the last analysis, a clinical one—the tendency of any given tumor to local recurrence and to metastasis, and from the clinical standpoint, there is a time in the life history of every tumor when it is benign, when it has no tendency to recur after removal, when it does not and will not set up metastases if excised. The emphasis is now laid upon the malignant tumor of the breast, and it cannot be denied that until some new method of diagnosing cancer in its earliest stages has been evolved, we cannot hope to achieve the ideal of an operative benignancy of 100 per cent. But if the education of profession and laity meets with even a fair measure of success, the benign tumors of the breast will play a much more important part in the surgery of tomorrow than they play in that of today.

The frequent occurrence of neoplasms of the breast is readily understood if we remember that the female breast from adolescence to old age is almost constantly undergoing the changes of evolution or of involution. From birth until puberty the mammary gland consists of a few sparingly branched tubes or ducts, unfurnished with acini. At puberty, with the development of the acini, the epithelial structures and the characteristic transparent periductal connective tissue, rich in cells, become prominent. Later, during pregnancy, alveoli are formed from the terminations of the ducts by a process of budding; the development of acini, the epithelial proliferation is now at its height. With the cessation of lactation, evolution gives place to involution, unless another pregnancy again calls forth the same cycle of changes. With the approach of the menopause, regressive degeneration is again manifest; the glandular substance atrophies, the ducts often becoming clogged with the cast-off epi-

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*Read before the Iowa State Medical Society, Sixty-third Session, Sioux City, May 13-15, 1914.

thelium so that here and there a duct becomes dilated; fat cells develop in the connective tissue; and at last the excreting ducts may be all that remains of the gland proper.

A comparison of the physiologic with the pathologic history of the breast shows a striking parallelism. In the second and third decades of life, when the transparent periductal connective tissue is most prominent, we have the era of fibroid tumors of the breast. These periductal fibromata are the most nearly benign, perhaps I should say the most permanently benign, of all the neoplasms of the breast; for even the periductal sarcoma, usually considered the black sheep of the family, is only locally malignant. In contrast to the other members of this group, which are comparatively rare after 40, the periductal sarcoma belongs to the fifth and sixth decades, the period of degenerative changes. It demands amputation of the breast, but a more radical operation is unnecessary. When a periductal myxoma has attained considerable size it, too, may call for amputation, but for the smaller periductal myxomata and fibromata simple excision suffices.

Tumors of the epithelial type first make their appearance in the latter part of the third decade, and occur with increasing frequency in the fourth, such tumors constituting almost two-thirds of the surgical diseases of the breast at this period, while the fibroid type, which made up 50 per cent of such diseases during the preceding ten years, is now represented by but 10 per cent. The benign members of the epithelial group, the fibro-cyst-adenoma and the papillary-cyst-adenoma, which even in the third decade are outnumbered by carcinoma, are gradually displaced by the latter until in the eighth and ninth decades carcinoma stands alone, i.e. after seventy every mass in the female breast is malignant by the time it is seen by the surgeon. The explanation for this predominance of tumors of the epithelial type during and after middle life is again to be found in the physiologic changes which then take place, for the regressive degeneration of the epithelial structures during and following the menopause is a physiologic process in itself, though unfortunately it is one in which pathologic changes are frequently manifest.

Both the fibro-cyst-adenoma and the papillary cyst adenoma are more prone to malignant change than are the tumors of the periductal group, and operation, always indicated, is even more imperative here. A variation in the tendency to malignancy is again observed between the fibroid and the papillary type, the papillary cyst-adenoma, appearing in the later years of life, being found associated with carcinoma in perhaps 10 per cent of cases. Resection in the case of smaller tumors, amputation where the mass is large, is sufficient protection against recurrence, however, even in the case of papillary cyst adenoma.

Abnormal involution gives rise to a most varied clinical picture,

and the attempts at classifying these changes have given rise to a nomenclature almost as varied: chronic interstitial mastitis, chronic cystic mastitis, senile atypical parenchymatous hypertrophy, are among the terms most commonly applied. The term abnormal involution, used by Warren in his excellent monograph on benign tumors of the breast, is the broadest term and is, perhaps, to be preferred for that reason. The process of involution is primarily a physiological one, but the cystic changes which result from the clogging of the ducts may stimulate the epithelium to secondary growth; a simple hyperplasia results in the majority of cases, but in a lesser number the process presents the picture of a new growth. Clinically it is impossible to draw any hard and fast line between simple hyperplasia, and hyperplasia of the proliferative type; and because of the tendency to malignant degeneration exhibited by the latter, operation is always indicated. If the process is found, at operation, to be a localized one, resection of the area involved will suffice; where the entire gland is involved or where there is any question of malignancy, simple amputation should be performed. It must not be forgotten, however, that there is a normal as well as an abnormal involution, and that a certain degree of induration in the tissues about the slightly dilated ducts and acini is physiologic and calls for no treatment. Here the problem of correct clinical diagnosis is accordingly an all important one, and the unfortunate mistakes which sacrifice a normal breast are much to be deprecated.

In diagnosing a tumor of the breast, four factors are usually taken into consideration: the clinical history, physical examination, the microscopic and the macroscopic examination of a cut section of the breast. The clinical history is, at best, of small service; the fact that a mass, still apparently encapsulated, has been present for many years, is no guarantee of its benign nature at any given period. Whether we believe that a primarily benign tumor may undergo malignant degeneration, or that a primarily malignant tumor may be quiescent for many years, this much we know: a tumor of the breast, whether it has been present for a few days or for many years, may at operation be found to be malignant.

The examination of the breast is hardly more satisfactory; the retracted nipple may be congenital; it may result from an acute mastitis; it is frequently met with in abnormal involution as well as in carcinoma. Dimpling, also, may result from an acute process, and at best is not an early sign of carcinoma. A discharge from the nipple is sometimes an accompaniment of cancer, but it is also a fairly constant symptom in papillary cyst adenoma, and sometimes exists where no tumor mass is palpable, in what someone terms mammary catarrh. The onset of carcinoma is not heralded by pain in a great majority of cases but the presence of pain does not by any means assure us that the neoplasm is benign. An inflammatory zone

about a benign tumor may even simulate the infiltration which we consider characteristic of malignancy.

True, there comes a time when these symptoms are no longer of doubtful significance, when the diagnosis of malignancy may be easily made; but prognosis is then too little a matter of question. In other words, at a certain stage in the development of a malignant tumor of the breast a definite diagnosis may be made from the clinical picture alone. A positive diagnosis of benignancy can never be based on the clinical picture; it must be made from a macroscopic and a microscopic examination of the mass itself, and from it alone. In the great majority of cases diagnosis may be made at the operating table from an examination of the gross specimen, with as great or even greater accuracy than from the microscopic examination of a hastily frozen section, provided only that the surgeon is as well trained a man in gross pathology as is the laboratory man in pathologic histology. A microscopic control examination should later be made in every case, not alone for the sake of scientific accuracy, but also for the sake of the practical education it gives the surgeon in making an accurate diagnosis at the operating table.

The making of such a diagnosis has an important bearing upon the choice of operative procedure—a choice which has, I believe, a more vital bearing upon the question of cancer prophylaxis than most of us realize. The frequently reiterated statement that it is better to sacrifice ten breasts in an unnecessary radical operation, than to sacrifice the life of one woman who might have been saved by an operation, is not open to question; but we may well ask ourselves whether the sacrifice of the ten breasts is really essential to the saving of the one life. The statement that the amputation of a breast, even by the radical procedure, which is inevitably followed by edema of the arm or limitation of motion in a certain small percentage of cases (Leaf), is a matter of small moment when the patient is approaching or past middle life, is undoubtedly true—in so far as the surgeon himself is concerned. That the patient's viewpoint is an entirely different one has been repeatedly brought home to me. Where it is a question of a breast or her life, she will sacrifice her breast, it is true, but even here psychic trauma is a regrettable though an inevitable factor with which we must reckon in many cases. I am convinced that this dread of mutilation, morbid if you will, plays an important part in the long interval which is allowed to elapse between the time when the tumor is first discovered and the first visit to a physician—and it is this interval which is responsible for so high a rate of recurrences, which gives cancer of the breast its terrible annual toll of death.

If in the educational campaign which is to teach women the danger of delay when a mass, however small, is present in the breast, they could also be assured that early operation meant not only prob-

able escape from the threatened horror of a cancer death, but also in many cases a comparatively insignificant operation instead of the mutilation of amputation or of radical operation, more women would seek the advice of the surgeon early. I am not advocating anything less than radical operation for carcinoma—here any other operation is criminal, I believe—but I do plead for more careful diagnosis at the operating table. Perform the radical operation in every case of carcinoma of the breast, in every doubtful border-line case, but let this margin of doubtful cases be as small as it is humanly possible to make it.

MALIGNANT TUMORS OF THE BREAST*

D. C. BROCKMAN, M. D., Ottumwa, Iowa.

When we realize that 80 per cent of all tumors of the breast are malignant when first discovered and that 80 per cent of the other 20 per cent will become malignant if let alone, a very simple process of reasoning teaches us that all cases of breast tumors are surgical and that only by prompt surgical treatment can we do our patient justice. Now if the above proposition be true (and no authority disputes it) it stands to reason that it is nothing short of criminal for a doctor to tamper with a condition that if left alone will prove fatal in 96 per cent of cases.

Notwithstanding these facts it cannot be disputed that a very large percent of the family physicians throughout the country still continue to treat these tumors with iodine, poultices or salves until they are beyond the limit of surgical treatment. Not infrequently these patients come to the surgeons after the family attendant has watched for weeks or months for the classical symptoms of retracted nipple or axillary involvement, and then only has he suggested the advisability of consultation or the possibility of an operation.

Such practice is absolutely without defense, yet it is being followed every day by members of this society: I am proud to say that most of this malpractice is done by doctors out side our society, the camp followers, who do not feel that they need to attend any society as they learned all that was needed years ago at some third or fourth rate medical school.

I would that I were able to use arguments that would be sufficiently forcible to induce every member of this association to pledge himself that from this day he would never again be guilty of applying any medicine whatever to a tumor of the breast. If I could do that and nothing else I would feel that I had been a benefactor to the human family and a blessing to womanhood.

Would that we had more lay writers like Adams and Bok, writing for popular magazines as they have done, pointing out the dan-

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*Read before the Iowa State Medical Society, Sixty-third Session, Sioux City, May 13-15, 1914.

gers of neglecting breast tumors. Let us all join hands with these philanthropists and help them wage a campaign of publicity that will be the means of saving thousands of lives of poor women who are now being sacrificed to ignorance.

It is not my intention to differentiate between tumors benign and malignant as that has been so ably done by the last essayist.

When we consider that only one out of five tumors of the breast is benign and that they occur mostly in young women, it behooves us to look with suspicion on every such growth and to consider it malignant unless it can prove itself innocent: and since it is impossible to differentiate in a considerable number of such tumors with out the aid of a microscope we should learn to play safe in every case.

While it is a crime to procrastinate in a case of malignant or suspicious tumor of the breast, it is a misdemeanor to unnecessarily mutilate a breast for an adeno fibroma or other encapsulated non-malignant tumor that can be safely excised without any serious deformity: but if there is any shadow of a doubt as to the diagnosis a frozen section should be made at the time of operation and if malignant a complete operation should be done. When in doubt decide in favor of the patient's welfare.

The differentiation between sarcoma and carcinoma is easy at times and impossible at others, but this is of no serious importance as the operation is practically the same in both cases.

While we look on sarcoma as a disease of young life we do not infrequently find it occurring in the breast and uterus of women past fifty or even sixty. On the other hand a considerable per cent of cancer of the breast occur before thirty.

The causation of malignant tumor is suggestive but not conclusive. A tumor of the breast resulting from a single blow is probably sarcoma, while a tumor forming in scar tissue or the result of chronic irritation is likely to be carcinoma.

At this time I wish to call your attention to the often neglected cases of Paget's disease of the nipple, a most insidious type of cancer that all too frequently is not recognized until it is too late to do good by any surgical procedure. It is the exception for a diagnosis to be made in these cases until too late.

I want to warn the members of this society never to let a case of eczematous eruption about the nipple run on for weeks and months without recognizing the gravity of the case. Remember that every case of scaly eruption surrounding the nipple not due to nursing is probably a cancerous condition and requires very early, active treatment if the patient's life is to be saved. So much has been written on this subject that every doctor in our state should be able to recognize the condition early, but as I said before it is seldom diagnosed in time to save the patient's life.

The prognosis of sarcoma of the breast is very grave. Except

in the giant celled varieties the prognosis is well nigh hopeless, about 95 per cent recur within a year no matter how complete the operation is performed. The large celled type are much more amenable to treatment, the larger the cells and the more compact the stroma the more hopeful the outcome. Other things being equal the younger the patient the less hopeful the prognosis.

The prognosis of the breast cancer is very much better, but here the age of the patient is most important. I have never seen a case of cancer of the breast in a woman of less than thirty-five that did not recur in less than one year no matter how early or thorough the operation. A fat young woman with cancer of the breast is in an absolutely hopeless condition. On the other hand an old thin woman with a hard cancerous lump in her breast will have no recurrence even if its removal is effected by much less radical operation than is usually recommended. The reason is that the lymphatics of the young woman are two or three times as large as those of the weezened-up old grandmother.

Here as in cancer elsewhere the prognosis in general depends on the time of operation and the completeness of the procedure. Up to the present time probably the average per cent of cures in breast cancer will not exceed 25 per cent but by the radical operation that is recommended by the authorities of the present day, together with the early diagnosis that should be made by every practitioner, the per cent should and I feel soon will reach double that number.

If the family physician will follow our simple advice and have every case of breast tumor treated surgically as soon as discovered and at the same time the man behind the knife becomes a surgeon instead of simply an operator, then the statistics of cancer of the breast will be revolutionized and we will be able to show 50 per cent or more recoveries. It is to this end that I am here today urging every doctor in this room to unite with me in a crusade in favor of very early complete operation on every case of breast cancer.

Time will not permit me to go into details of the operation procedure of these cases nor is it necessary for me to do so.

The text books are full of the most minute details of the technic of these operations, and no man has any moral or professional right to attempt an operation of this kind until he has read and reread: until he has mastered the scholarly monographs of Handly, Rodman, Shields and other like classics, not only read but studied these writings until he has mastered the great underlying principles of this type of surgery, not alone the operative technic but the anatomy of this region, the course of the lymphatics and dangers attending the surgery of the breast axilla and clavicular region. This is what the would be surgeon needs today rather than to study this or that man's lines of incision. The true, conscientious surgeon can do a complete operation through any of the ordinary skin in-

cisions, while the tryo the ignorant, brazen, conscienciousless operator cannot do his patient justice through any kind of an incision. What poor suffering humanity needs today is less operating and more surgery and nowhere is this needed more than in the surgery of the breast.

There's one important thing I am anxious to impress on the surgeon who attempts to operate on malignant tumor of the breast: that is he should study the location of the tumor and then do an operation that will most likely remove all the infected lymphatics in this particular case. This he cannot do unless he understands thoroughly the anatomy of the lymphatic system in this region.

Handley's monumental work on the lymphatics of this region is an important study and should be thoroughly mastered by the surgeon before he attempts this kind of an operation. The man who excises a cancerous tumor alone or the tumor with the breast without also removing the axillary glands the facia, muscles and enough of the skin to give the patient the best possible chance of a cure is not a surgeon and should be debared from attempting to practice our exacting art. It is to urge every doctor here to abstain from doing these operations, or for that matter any kind of an operation until he has mastered the principals of surgery and has made a special study and preparation on this region in order that he may be able to give his patient the greatest possible chance of cure. It is the lazy, careless, incompetent, pretender that is the curse to our noble profession and a menace to patients.

There will always be inoperable cases of cancer of the breast apply to the surgeon for relief, and there will continue to be recurrences after operations that are hopelessly incurable, what will we do with them?

Humanity forbids us to abandon them to their fate or turn them over to the conscienceless quack or incompetent. We owe them a duty and must perform it whether we wish to or not.

We can do much to relieve these poor unfortunates even if they cannot be cured. Many of these cases can be greatly helped for a time by the use of the x-ray, especially the hopeless cases of nodular pachydermic cases, the cancer en cuiress. It is truly wonderful how the painful nodules in many of these cases melt away under properly applied irradiation, the pain leaves, appetite returns, nutrition improves and the patient is spared for years in a very comfortable condition, usually until some internal metatasis occur that ends her life.

Too often these patients are sent away with a box of morphine and told that this is all there is to do: this is wrong. Put off morphine as long as possible, phenacetin, aspirin or some other milder anodyne will relieve the pain for weeks and months and morphine may be saved until the later stage when most urgently needed, while if a tolerance is established early for the drug no benefit will be derived from it when the time comes that it is most needed.

After the operation has been done no matter by whom or how completely the site should have through, continued x-ray treatment for two or three months, to destroy any atypical cells that may have wandered beyond the excised tissue. This is a procedure of the utmost importance and should not be neglected under any circumstances.

ELEPHANTIASIS—REPORT OF A CASE

C. L. CAMPBELL, M. D., Atlantic, Iowa.

In the Journal of Surgery, Gynecology and Obstetrics of March 1914, Dr. Frederick A. Besley of Chicago reports a case of congenital elephantiasis and among some of his deductions after relating the difference in nomenclature and pathology he makes this statement: —slow growth is usual, rapid increase in size is common in all forms of lymphangiomas, sometimes due to the occurrence of infection. Acute inflammation may result in subsequent cicatrization and shrinkage, but may lead to dangerous complications, such as extension along the lymphatics or sloughing and exhausting lymph fistulae. Regular growth is the rule; skin and muscles may be infiltrated, nerves and blood vessels pushed aside and even bone eroded.

As to treatment he makes this statement:—Is most satisfactory in the cystic form which is encapsulated, and may be completely removed by blunt dissection, removing as much skin as may be required. Removal is not possible in the cavernous forms. Partial removal of deep wedges is disappointing in results, and there is danger of inflammation and lymph fistulae. The repeated injection of irritants may cause some diminuation in size. Cauterization should be discarded; also ligation of the blood supply of the part, as the latter does no good and may result in gangreene.

Keen's Surgery Vol. II pg. 599 says concerning the management and treatment:—"The administration of medicine of various kinds has been tried in this disease but with no curative effect. Iodin and its salts, arsenic, purges, and diaphoretics have been thought to check its progress, but the most enthusiastic advocates do not claim to have observed cures. Surgical measures are only worthy of consideration.

Comfort is afforded, and delay of development effected, by the horizontal position of the body, with the elevation of the affected part, elastic bandaging, evaporation lotions, massage, strict cleanliness, and preventation of all irritation. But when the patient is crippled from its growth, either from its weight or size or from the suffering which it causes, something more radical should be undertaken. When the disease affects the lower limb, ligation of the femoral artery has been performed with the idea of preventing the increase of the hypertrophy by removing the blood supply; but the

uselessness of this procedure has been fully demonstrated. Moreover it has frequently caused gangrene, as might have been expected, but it has now been discarded by judicious surgeons. Puncture of the skin has been adopted but without compensatory results.

Amputation of the limb has been done where the size of it was disabling. The excision of the large masses of the overgrown tissue has been adopted by Rogers. As the cause of the difficulty it not removed by the operation, there is a constant danger of its reoccurrence."

Cheyne and Burcherd of London in their system of surgery speak much in the same language but have no definite method of management.

Bryant and Buck in their system of surgery say:—"The ridding of the system of the filariae is of course the prime object or indication in those forms of lymph-angiomas, lymph-adenoceles and elephantiasis which are due to their presence. I am not acquainted with a specific for accomplishing this. The removal of the patient to a district free from filariae may result in relief from the parasite. When this is not possible, surgery may give relief to a certain proportion of the sufferers. Those who have circumscribed tumors suitably located are greatly benefited or cured by the removal of these masses. Certain forms of lymph-angioma are so diffuse that the removal is impossible. For cases like these the cautery has been advocated; and so also the employment of pressure by means of pads and tight bandages, and the application of counter irritants. Lymph varices sometimes rupture and form fistulaes which can be successively treated by caustics or by extirpation of the fistula wall. The masses of hypertrophied tissue which are formed in cases of elephantiasis, and even the entire leg or other member, in certain instances, may be removed surgically. The healing after surgical operation on these tissues is often delayed, but may usually be obtained."

With this brief recapitulation of some of the best surgical authorities I report the following case:—

Miss O. age 23, single, family history good, one brother had leg amputated as result of fall, no history of tuberculosis in family:

Patient's statement:—In the winter of 1901 was taken sick with measles and pneumonia; about half a year after, noticed some swelling at ankles; reported to Dr. Heilesen and was under his care about three years, but the swelling was gradually getting worse. I was then taken to Dr. McClease of Marne and he directed me to wear rubber stockings but otherwise there was nothing to do; wore the stockings for three years but swelling was there the same. In the spring of 1907 the swelling went up to my knees and was getting harder. I then went to Dr. Brooks of Audubon, Ia. and he treated me for some time but they continued to grow worse, so he sent me up to the Mayo Brothers of Rochester, Minn. and they said there was nothing the matter with me, but it was caused from the

measles and pneumonia and would perhaps get worse. They took an x-ray of my ankle as it might be in the bone. Then for some time they remained the same and I did not do anything for them. In the summer of 1909 the swelling did not go down at night and there was a numb feeling in them. Then I tried osteopathic treatment; said it was my spine and not to be on my feet more than necessary for some time; we thought they were better but when he said I could walk again it all came back. I took his treatment a fall and winter.

The summer after, the swelling went above my knees and had burst two or three times. We went to Dr. Allison, Omaha and he examined me and took me over to Drs. Crummer and Bliss. Dr. Crummer said it was my heart and my blood was too thin; and he gave me some medicine; was with him about half a year. He said he did not think there was anything that would cure me. I went back to Dr. Allison and he treated me for a year and a half until I went out west; there I was recommended to Dr. Quivley of Tacoma and he treated me about a year, until I went back home. In the fall of 1913 they hurt me and were still getting harder and I went to our home doctor, Dr. Robison, but he said he had never seen anything like it and advised me to go to some other physician.

General condition good; skin over body normal except from knees down; tongue clean; area of liver dullness normal; no distention of stomach; no tympanites or tenderness over abdomen; no tenderness over ovaries or tubes, menses every four weeks with 3 to 4 days duration; area of cardia normal; heart sounds normal; lungs normal; bowels regular; urine free of albumen and casts, normal quantity and color; upper extremities showed no deviation from that of a well developed woman.

The right leg was swollen from the knee to the plantar surface of foot; there was but little variation between the calf and ankle, welts of tissue disfigured the dorsum of the foot and only a very low slipper could be worn; the skin was coarse, pigmented, discolored and scaly, looking very much like pig skin; the skin was covered with a coarse hair; three inches above the ankle there was an area of tenderness about three inches in diameter.

The left leg was swollen from above the knee to the plantar surface with great folds and masses overriding the dorsum and sides of the foot; the plantar surface of the foot was cold; the skin rough and scaly and discolored with dark pigment; the hair was more coarse than on the right; the measurements of the left about the calf was 22 inches with about the same above the ankle for the first few days of observation.

The skyograph showed nothing abnormal with bones; the soft structures show multilocular cysts filled with a sero-lymph fluid; these cysts no doubt were the lymph evolution of the lymph varices, resulting from the choked lymphatics, the walls becoming hard and fibrous.

Patient placed in Atlantic Hospital Jan. 5th, 1914. Legs elevated; given thyroid extract every four hours, mercury protoiodide 1-4 gr. night and morning followed by magnesia sulph. in morning; legs and abdominal organs massaged twice a day; after the third day, was brought to the office and both legs x-rayed followed with high frequency over legs and body. This course with the x-ray was given every other day for three weeks. Patient left hospital at end of fourth week as she was able to walk several blocks, from her room to the office; legs then had assumed their normal contour and she was able to wear high laced shoes.

The high frequency was continued every other day for a month, then twice a week for a month and now once a week. At this date they are normal in appearance and the skin is soft and clear as other parts of the body.

PELLAGRA

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Pellagra is a mongrel word derived from the Latin Pellis, skin and Greek Agra, catching. This word is the name of a chronic disease, of unknown cause, characterized by gastric and intestinal symptoms, skin eruptions, and nervous symptoms, such as melancholia and mania.

The occurrence of from thirty to fifty thousand cases of pellagra in the United States within the last six years with a deathrate of about 39 per cent, calls attention to this disease as one of national importance. The fact that the figures given above constitute only a rather rough estimate of the number of cases, again directs attention to the very defective machinery for securing vital statistics in this country.

Although it is outside the province of the U. S. Public Health Service to collect such statistics, Lavinder, of that service, has attempted to gather figures concerning the prevalence and distribution of pellagra in the U. S. The pellagra area lies to a large extent outside the registration area of the country and the figures obtainable through the U. S. Census Bureau are almost a negligible quantity. Lavinder, therefore, endeavored to secure figures from state authorities, from public institutions and from private sources, and though this method of securing information is never accurate or satisfactory, yet he believes that it may be said with some degree of assurance approximately how much pellagra there is in the U. S., and where it is to be found. A map is given showing that pellagra has been reported from every state in the Union except New Hampshire in the east and the group of western states comprising Idaho, Minn., Montana, the two Dakotas, Utah, Wyoming and Nevada. The greatest prevalence is found in the group usually spoken of as the Southern states, which group of states, with the exception of Ken-

tucky, is practically all outside the registration area. In only one state is the disease reportable by law.

Many interesting facts concerning pellagra are given in Lavinder's report but, as emphasized by him, although pellagra cannot be compared in prevalence with such a disease as typhoid fever for example, yet the large number of cases and the high mortality-rate together with its wide and apparently increasing distribution make it a disease of national importance, and afford an additional strong reason why every state not already having adequate vital statistic laws should at once enact such laws. The aid which accurate figures and facts concerning the epidemiology of this important disease would give in the solution of the problem of pellagra should alone be sufficient to demand the enactment of such laws in the coming legislatures of every state not now within the registration area.

Jennings and King of the Bureau of Entomology, U. S. Dept. of Agriculture state "That many hypotheses of the causation of pellagra have been advanced, but none of them, perhaps, quite accounts for all of the phenomena involved." They go on to say that "It is not our purpose to discuss these theories in detail or to attempt to show the truth of any one of them, far less to propound a new one, but rather to point to facts which may have a bearing on the question." "If it be admitted that pellagra is a distinct morbid entity, it is evident that the essential factors in its causation and spread must be uniformly active wherever the disease is endemic. In spite of this self-evident fact, the phenomena of the disease present many puzzling and apparently contradictory facts, under the varying conditions of environment and habit of its victims. Yet somewhere among these confusing phenomena must lie the constant element which is the cause of the manifestations of pellagra."

"That the disease is due to an infection is an opinion held by a considerable body of investigators, and the arguments in favor of this hypothesis seem to warrant its serious consideration. On this hypothesis and the epidemiology of the disease are based the theory that pellagra is an insect-borne diease." Now if this is true, "A consideration of some entomologic facts which appear to have significance in this connection may be worth while." Without going into further details of this paper the conclusions arrived at may be summarized as follows: "If pellagra is caused by an infection, especially of protozoal origin, and is transmitted by an insect, the present state of our knowledge leads us to the provisional belief that the following deductions may be tenable." "Under conditions existing in the region of pellagrous endemnicity in S. Carolina, the lice, fleas, mosquitoes and bedbugs show characteristics of habit, distribution and abundance which appear to exclude them from serious consideration in this connection." "The biting habit and, to a certain extent, the distribution of the flies of the genus Simulium together with their lack of habits which bring them into close as-

sociation with man, seem to present weighty arguments against the incrimination of these gnats as the active agent in the tranmission of pellagra.'' ''The cosmopolitan biting stable fly, Stomoxys Calcitrans, from its distributional and biting habits, its close association with man, its conformation to the obvious requirements of the disease-transmitting insect and the agreement of its special characteristics with phenomena incident to the occurrence of pellagra, offers strong reasons for its consideration under the premises.'' ''It is hoped that attention may be directed to this fly and observations bearing on its possible relation to the disease be generally made. We would add that, should a causative organism be shown to exist which is a bacterium rather than a protozoan, and should this organism invade the body through either the mouth or the skin, the house or typhoid fly, Musca Domestica, and the flies whose habits at all resemble it, would lie under strong suspicion.'' ''It is needless to say that the house fly is excessively abundant and of universal distribution in the region studied.''

''We are also aware that the communication of pellagra in a purely mechanical manner by biting insects is a possibility and, if shown to exist, would radically change our ideas as to the insect which may be involved. Finally, we wish to repeat that essential uniformity of causation must be assumed to exist universally and that the demonstrated failure of a supposed etiologic factor to account for the phenomena of pellagra in one locality must serve to exclude it from consideration as a factor in another.''

Pathology: Sandwith found in certain cases degenerative changes in the spinal cord, most marked in the columns of Goll and Burdach, but in many other cases no pathology was evident. The absence of cord changes was explained by the fact that either these patients had suffered from the disease only a year or less, or they were apparently not far advanced, so that in his opinion cord degeneration, as discovered by the microscope, occurred late in the disease. From autopsies in cases in which the condition had existed for different lengths of time, cell degenerations were noticed in the brain cortex as well as in the lateral and posterior columns of the cord.

In a large number of autopsies done by Lombroso and others, variable changes are recorded as present in brain and spinal cord. In some instances the weight of the brain was increased, in others diminished; in some hyperemia was present, in others anemia was noted. Degenerations of a fatty, pigmentary or calcareous type were present in the walls of the cerebral capillaries. The pigmentation universally found in the sympathetic and spinal ganglia was considered an indication of marked nutritional changes in the central nervous system. The lesions found in the cord are described as being similar to those due to ergotism, their advance depending on the severity of the poisoning or lowering of resistance by intercurrent conditions.

Roberts states that there is atrophy of the convolutions and in a majority of cases the weight of the entire brain is reduced, but that in many instances the weight is normal or increased. Hyperemia or anemia was noted, and also degenerative changes as mentioned above. Gross cord lesions were not very evident. The microscopic changes noted were degeneration of the direct pyramidal tracts and columns of Goll and Burdach, together with pigmentary degeneration of the cells of both anterior and posterior horns.

Spiller has emphasized the point that the degeneration in the cord is not a systemic but a diffuse process, and so resembles a toxic degeneration and does not essentially differ from that in anemia, except that in pellagra the nerve-cells are more affected. He concluded that the cause must be some toxic or infectious agent acting on all parts of the central nervous system causing cellular degeneration as well as nerve fiber degeneration in the posterior and lateral columns.

The changes in the gastro-intestinal tract seem to vary chiefly in degree, being more marked in the acute forms, but in all cases in which definite lesions exist, they consist of chronic catarrhal inflammation with exfoliation of epithelial cells and infiltration of the stroma. Thrash was in doubt whether or not this was a terminal condition as a result of the prolonged illness. He believes that the gastro-intestinal disturbances are secondary and due to the effort to excrete poisons ingested or formed from perverted metabolism and cell destruction. Atrophy of the muscular coats of the intestinal wall has been frequently mentioned, as present in a large proportion of the cases examined, and rarely anemia or hyperemia of the gastro-intestinal mucosa, as well as chronic enteritis.

Tuczek states that definite post-mortem results are found in the acute forms, typhus pellagrosus, in the form of chronic gastro-enteritis with the formation of ulcers and swelling of the mesenteric glands. This is associated with marked changes in the central nervous system and with general visceral involvement. Roberts in studying the pathology of pellagra noted atrophy of the muscular coats of the stomach and in acute cases found a true gastritis. The changes found in the intestine seemed to depend on the duration and severity of the disease, consisting of atrophy of the muscular coats and, in acute cases, of enteritis with ulceration, the latter chiefly in the colon and rectum.

The cutaneous phenomena are, as a rule, the last to appear, and these can be divided roughly into three stages—the first congestion or erythema; the second, with added scaliness, thickening, and pigmentation; and the third, a tendency to atrophic thinning. The skin which assumes a reddish color, soon develops a variable degree of thickening, and to these changes are added burning and itchy sensations, and, later on, there may be a loss of sensibility. The epidermis desquamates, the underlying surface appears red, and not infre-

quently is fissured. Vesicles, bullae, and petechiae are also common. Pigmentation takes place during and after the erythematous attacks, the parts remaining more or less thickened. In the winter the skin shows signs of improvement, but as late spring approaches the skin again becomes worse. After repeated attacks the skin becomes wrinkled, thinned, and lax, and takes on a senile appearance, and presents a blushed-red or dark-brown color, and tends to exfoliate in large flakes. The fingers become more or less fixed in a semi-flexed position. Gradually the patient becomes debilitated and greatly emaciated, owing to digestive weakness and to frequent co-existent diarrhea, and also doubtless, as a result of the changes brought about by the involvement of the cerebro-spinal system. Later there is great muscular weakness, pain in the head and back, convulsions, stupor, melancholia, and insanity, with a fatal termination.

A summary of the observations made by Grimm of Savannah, Ga. are as follows: More cases developed among the whites than among the negroes. More cases occurred among females of both races than among the males. More cases developed at ages between 20 and 40 years than at other ages. Among the married and widowed pellagrins the females predominate; the single pellagrins are equally divided between the sexes. More cases had their onset during the months of May and June than in other months. More cases developed under conditions of poverty than of comfort, and more under conditions of comfort than of affluence. More cases developed in the vicinity of other cases than otherwise. None of the facts seem to indicate that pellagra is hereditary. The food used by the people in whom pellagra is prevalent deserves consideration as a possible etiologic factor.

I wish to wind up this article by giving some observations made by Wm. H. Harris of New Orleans. "The inability to produce satisfactorily pellagra in animals by means of various food-stuffs (spoiled maise and other cereals) which are considered by many observers to be in some manner responsible for the production of the disease, led to investigations based on the hypothesis that pellagra is caused by a living micro-organism and not by a chemical intoxicant. Therefore it seemed logical that the causal agent would be continued in one or more of the various tissues affected, and by utilizing these the disease could be reproduced in a susceptible animal. It was considered inadvisable to attempt injections of the whole tissue emulsions because of the heavy bacterial flora of the intestinal tract, the contaminations of the skin and the probable secondary infection of the patient dead of pellagra. These considerations together with the view that the disease in man might be due to a filterable virus occasioned the employment of filtrates from the various organs. For this purpose the skin, alimentary tract and more especially the brain and cord, since many of the characteristic symptoms of pellagra indicate disorders of this system, were filtered and utilized for animal injection.

In the spring of 1910 experiments with a Berkefeld filtrate of the infected human tissues were carried out on the monkey. These materials were selected from the fresh necropsy of a case of undoubted pellagra which presented clinically a typical picture of the disease; viz. extensive skin lesions, stomatitis, diarrhea and various nervous manifestations. The skin lesions involved the hands, face, legs, scrotum, and were sharply defined, being of a distinct black color, dry, elevated and scaly. A complete necropsy was held within two hours after death, and the only lesions found in the gross, and microscopically were those present in fatal pellagra; no concomitant disease was present. The tissues of the different parts of the central nervous system, especially the cord, portions of the skin lesions and of the alimentary tract including the nasopharyngeal mucus membrane were removed. These were mixed with equal amounts of normal saline solution, ground together in a mortar and allowed to stand in the ice-chest over night. After course filtration the juice was passed through a Berkefeld filter, letter N. As the primary aim was to infect an animal with the disease, the filtrate from the tissue mixture was injected subcutaneously, intravenously and intracranially in large quantities into a full-grown, normal male. (Monkey No. I). After showing immediate pressure symptoms the animal recovered from the operation and remained apparently normal for many months, when he developed irregular dark patches on the face, forearms, hands, back and sides of the body. He gradually grew thin and weak and finally died with all the signs of pellagra. The length of time for the development of the disease in this animal occasioned considerable skepticism of the results and the experiment was not repeated until a similar typical fatal human case was again available. The necropsy protocol is given below.

On Dec. 2nd. 1912, a full-grown healthy Macacus rhesus (Monkey 2) was inoculated with large quantities of a filtrate from parts similar to those previously used, which were obtained from a fatal case of recurrent pellagra that showed on post mortem examination no evidences of other disease. The injections were given intracranially, intravenously and subcutaneously and, aside from some immediate pressure symptoms, the animal remained apparently normal for a period of two months.

Another distinct case of fatal pellagra presented itself in February which revealed at necropsy only the lesions consistent with pellagra. The small intestine showed extensive inflammation of the mucosa. Two separate filtrates for animal inoculation were prepared from the tissues of this subject; one from the brain and cord and another from the intestinal and skin lesions. The nasopharyngeal mucus membrane was not used and only a very small amount of skin. The animal which had previously received injections of pellagra filtrate (Monkey 2) was given a second injection of equal parts of these two filtrates mixed together. Another animal of the rhesus

type (Monkey 3) was injected intravenously and intracranially with the filtrate prepared from the brain and cord. These two animals were inoculated on Feb. 12, 1913.

Early in May, Monkey 2, which had received two inoculations, one in December and the other in February, showed irregular patches of a copper or dusky red color about the face. On May 10 these patches were raised, considerably darkened, very dry and more clearly defined, being located across the nose and spreading in a wing-like manner on either side under the eye and over the cheek. The shape of the lesion in general was somewhat that of a butterfly. At this time copper-colored lesions had appeared on the summit of the concha of both ears and at the external canthus of the eyes and also over the backs of the hands. There was a distinct symmetry in the bilateral arrangement and shape of these lesions. Subsequently the animal has become melancholic, emaciated and weakened; he sits about the cage (dimensions 8x10x15 feet) or slowly climbs instead of jumping about as previously. The lesions apparently itch since he scratches them frequently and often is seen picking off the scaly plaques. His appetite is poor. A slight diarrhea has developed and he shows considerable salivation, slobbering freely; the tip of the tongue is granular in appearance and the papillae are considerably enlarged. On May 28 the skin lesions have become almost black in color and are easily visible at a considerable distance; when viewed closely evidences of cracking and scaling are seen. On June 1st, the lesions look about the same except that there are deeper pigmented areas within the large plaques, producing a somewhat mosaic appearance. Along the bridge of the nose some of the scaly plaques have fallen off, one of which measures approximately 0.5 cm. The hands over the dorsal surface of the fingers and over the wrists posteriorly now present distinct dry black lesions and show, especially on the fingers, distinct scaling. The hairs over the phalanges have disappeared. The animal is growing progressively weaker and thinner and the signs and symptoms are becoming more marked. Monkey 3 is still in good condition and quite lively but presents about the face a few irregular, rust-colored macules, quite like the early lesions of Monkey 2.

Though the clinical observations on Monkey 1 are not so detailed as desired since the period of incubation was so long that routine examinations had been discontinued, the necropsy findings are of particular interest. The animal is extremely emaciated and presents large irregular pigmented plaques on the face, forearms and back. These are in some areas of a chocolate color while other areas show a gray scaly surface; they vary in size from approximately 2x3x3.5 cm. to 4x6x7 cm. and in other places they have merged together to form more extensive patches. The lungs and the heart are normal and aside from some inflammation of the small intestine no other gross lesions are present. Microscopically, the most typical lesion

is found in the sections of the skin ,which show extensive hyperkeratoses of the epidermis, marked increase in the depth of the papillae and abundant pigmentation in the deeper portions of the corium where many chromatophores have wandered into the deeper strata. The cutaneous lesions are identical with the microscopic picture of the skin in human pellagra.''

ADHESIVE COMPLICATIONS OF THE RIGHT ABDOMEN*

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The numerous unsatisfactory results of operations for chronic appendicitis in years past have given rise to many speculative explanations, but it was only with the dawning of our knowledge of the importance of adhesive bands and membranes that our appreciation of these results was realized.

While the importance of the chronic appendix should not be underestimated, still a full realization of the pathological importance of the associated adhesions is absolutely necessary to produce the best results from our surgery in the right abdomen. The surgeon is no longer justified in removing only the appendix unless he is fully convinced that the associated bands of adhesions are not or may not produce symptoms deleterious to the patient.

The following anatomical condition is described in Cunningham's Anatomy—''In the great majority of cases only the two sides and anterior surface of the ascending colon are covered by peritoneum, the posterior surface being destitute of a serous coat. In a small proportion of bodies however the ascending colon is provided with a complete peritoneal coat and a mesentery (?) but this is so short that it admits of but a slight amount of movement in the gut.'' In respect to the cecum we find, ''The serous coat is complete and forms a perfect investment for the process''.

In reviewing the physiology of the cecum and ascending colon I wish to quote Howell, ''Unabsorbed food material remains for a long time in the large intestine where a large absorption of water occurs. The alkaline reaction of the contents of the large intestine makes a favorable environment for the growth of bacteria especially the putrefactive bacteria, that attacks proteid material so that putrefaction is a normal occurrence in the large intestine.

It is well known that excessive bacterial action may lead to intestinal trouble such as diarrhea or to the more serious interference with general nutrition owing to the formation of toxins. In the ascending and transverse colon and cecum the most frequent movement is antiperistalsis.''

With this brief review of the normal anatomical and physiologi-

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cal conditions of the cecum and colon let us consider the bands and membranes frequently found at operation; First—the bloodless fold of Treves which is unquestionably an embryonic vestige and consists of a fold or peritoneal reflexion from the lateral wall over the caput cecum and appendix and attached to the peritoneum of the caput and to the last two or three inches of the ileum.

Second—the parieto-colic fold of Jannesco and of Juvara which arises from the peritoneum at the left or inner side of the ascending colon passing over the anterior aspect of the ascending colon in an upward slanting direction and is attached to the parietal peritoneum at the right of the ascending colon.

Third—Clado's ligament which is a process of peritoneum passing from the right ovary to the mesoappendix which contains lymphatics and a small artery forming an anastomosis between the appendicular and ovarian vessels. This is found in about 10 per cent of female bodies examined.

Fourth—Lane's kink which consists of a band of adhesions binding the terminal portion of the ileum to the caput cecum which distorts the ileocecal valve and makes it necessary for the contents of the small bowel to enter the cecum at an acute angle instead of at a right angle as under normal conditions.

Fifth—Jackson's membrane or more appropiately membranous pericolitis. According to Jackson this is a "membrane from the hepatic flexure to three inches above the caput which spreads from the parietal margin over the external lateral margin of the internal muscular band and consists of a thin vascular veil in which long straight unbranching blood vessels course, most of which are parallel with each other and take a slightly spiral direction over the colon from the anterior upper peritoneal attachment to the inner lower portion of the gut ending just above the caput.

The appendix is not implicated in any way. Coursing with the blood vessels are a number of shining narrow bands of connective tissue which gradually broaden as they go and end in a slight fan-shaped attachment at various points on the anterior and inner surfaces of the colon. At these points of attachment the gut is held in rigid plication."

Doubtless many of these conditions exist without producing symptoms especially the embryonic folds around the cecum and the early stage of pericolitis.

However when they reach the pathological stage we have two distinct classes of symptoms. First; that class which embraces the various kinds of pain and tenderness. Second; those symptoms arising from the impaired mechanism of the cecum and colon which can be placed under the symptom complex of auto-intoxication.

The pain symptoms can be explained by the dragging on the parietal peritoneum by the irritated and distended gut. A normal colon during the process of digestion may be noticably distended

without producing pain or tenderness but when this colon is embarrassed by being surrounded and encompassed with an investing membrane attached to the sensitive peritoneum we can readily understand that as it becomes distended it will cause increased tension on the peritoneum and give rise to the acute spasmodic pains so often seen. These pains are diffuse and often radiate up the entire right side of the body. They are practically never accompanied by temperature or by localized tenderness as found in acute appendicitis.

The pain caused by Lane's kink is usually more localized around the lower right abdomen.

Clado's liagament may exist without producing symptoms, but in one case which I operated there was constantly pain over the appendix region with every menstrual period due probably to dragging on the mesoappendix by congested genital organs. In this particular case the pain has disappeared since the liberation of the ligament.

By far the most important symptoms or those classed under auto-intoxication are produced by the pericolic membranes. In the early stages of the development of these membranes it is questionable whether or not they produce symptoms but as they become more extensive and more firmly attached they interfer with the normal physiologic action of the colon. They produce angulations and kinking of the ascending colon, and often slight stricture at the hepatic flexure. This condition not only delays the passage of the contents of the colon but has a tendency to increase the putrefactive process in the colon and it is the increased absorption of these putrefactive products which give rise to the symptoms of auto-intoxication. This may possibly explain the diarrheas which many of these patients experience for several days following the removal of these membranes.

Moreover if a ptosis of the tranverse colon is associated with the above stated condition we may expect an increase of symptoms because of the acute angulation at the hepatic flexure.

Castor oil will relieve these patients for a few days but as the colon fills the old symptoms return. As a rule the tendency is for the symptoms to progressively grow worse.

These conditions are purely surgical and operation is the only hope for permanent relief. In closing I wish to append the resume of histories with the most prominent symptoms of several cases;

I. Mrs. S—Chronic appendix—Lane's kink—Jackson membrane—cystic right ovary. 5-6 years duration. Sharp shooting pains over appendix radiating up right chest to axilla, Recurrent twice a month, constipation, pain on jarring, digestion good, frequent bloating and sense of fullness right side, no vomiting, chills or fever.

II. Mrs. A.—Chronic appendix—Jackson's membrane—Ileo-cecal adhesions—pelvic adhesions, 8 years duration, cramps right abdomen, pain

on jarring; gaseous distension, little constipation, no vomiting, chills or fever.

III. Mrs. H.—Jackson's membrane, 2 years duration, constant soreness right side, pain radiating to umbilicus and up to right ribs, constipation, increased pain on jarring, no fever or vomiting occasional chills.

IV. Mrs. B.—Adhesions between cecum and lateral peritoneum, chronic appendix several years duration, sensation of dead weight or lump in right abdomen, more marked after straining and on lying down, throbbing sensation.

V. Miss P.—Chronic appendix, Clado's ligament—several years duration aching right inguinal region, increased just prior to menstruation, pain on jarring, no vomiting chills or fever.

VI. Miss H.—chronic appendix—Jackson's membrane multiple cystic condition of ovaries 8 months duration, sharp pains in lower right abdomen, no vomiting chills or fever.

BRAIN LOCALIZATION*

EDWARD MERCUR WILLIAMS, M. D., Sioux City, Iowa.

Such advances have been made in brain surgery within recent years that a general knowledge of brain localization, with the more ordinary symptoms of intracranial involvement is most essential.

Before taking up the consideration of the different brain areas it will be necessary to make a few general remarks about the signs of intracranial disease. As the localization of such lesions as thromboses or emboli are of little importance surgically, intracranial growths will be taken as the main subject under consideration.

The principal signs of brain tumor are headache, optic neuritis, or choked disc, vertigo, nausea, vomiting and convulsions.

The degree of intensity of these symptoms does not indicate the relative size of the growth or the length of time it has been present, as tumors of the brain often grow for a long period and to a great size without causing symptoms, the brain becoming accustomed to the gradually increasing pressure and displacement.

A sudden hemorrhage into the substance of the growth, or some other rapid change of toxic, degenerative or destructive character (following occluded vessels or destruction of tissue by pressure) may then cause the first signs of a growth which has been present for months or even years. This is particularly true of tumors of the soft infiltrating type. A glioma may almost completely infiltrate the tissue of the pons without giving any symptoms and this is also true in lesser degree of other portions of the brain. Where all the symptoms of brain tumors are present from an early period the growth is most likely to be from the dura or the bone. Occasionally, however, subcortical growths of dense character and great size will cause the presence of all the symptoms.

Sarcomata and carcinomata do not seem to have the same rela-

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*Read before the Woodbury County Society, Feb. 12, 1914.

tive malignancy in the brain as elsewhere in the body, consequently their presence may remain longer unsuspected than ordinarily supposed.

Headache is the most frequent of the symptoms of tumor. It is at times of the most severe character and patients have committed suicide on account of the intensity of the pain and there is a case on record where the patient bit one of his relatives through the arm during a paroxysm of headache. At first the headache may be somewhat intermittent, but later it usually becomes constant; it may be entirely absent throughout the course of the disease. The location of the headache has no significance as to the area of the brain affected, though the skull may be more sensitive to palpation or percussion over the region of the tumor.

Probably the sign next most frequent is optic neuritis, or in the more advanced cases choked disc. This occurs also in other conditions, encephalitis, meningitis, abscess, etc. Its cause, whether due to pressure, toxemia, inflammation and so forth is still a disputed point, possibly its causes in different cases may be anyone of the several given; the most accepted view at present is that of the pressure origin.

It occurs most frequently in tumors in the posterior fossa, the cerebellar and the occipital regions. The neuritis here is usually equally bilateral; unilateral neuritis when present generally indicates involvement of the part of the cerebrum more anterior and on the side of the neuritis; it is however much more commonly bilateral. Frontal growths in particular are more likely to cause an unilateral optic neuritis, or one more intense on the diseased side. While a tumor may grow for a long time without causing an optic neuritis, this will probably be present at some time during the course of the disease in every instance and frequent fundus examinations should be made in all suspected cases. Blindness is neither a necessary, nor a usual concomitant of early neuritis, though it is most often the outcome when the pressure is unrelieved. Transient blindness occurs, but it is frequently due simply to the error in refraction caused by the protuberant discs.

Actual amaurosis may be caused according to many observers by sudden pressure upon the chiasm by the distended third ventricle.

Nausea and vomiting are uncertain in the frequency of their occurrence. Frequently the vomiting is of the cerebral type, quick and projectile, often it comes on right after eating, with no apparent effort, no sensation of nausea, etc.

Vertigo is a common symptom, but must not be confused with slight dizzy spells so often found in patients of all character, where the growth is in or near the cerebellum or the nuclei of the vestibular nerves the vertigo is more likely to be present than in lesions elsewhere.

General convulsions when they occur do not have any particular localizing significance.

The most useful division of the brain into areas giving definite focal symptoms is, I believe, that of Mills and is as follows:

1. Prefrontal or psychic.
2. Mid frontal or intermediate psychic motor zone.
3. Post frontal, rolandic or motor area.
4. Post rolandic, parietal, or sensori stereognostic.
5. Parieto temporal or visuo auditory.
6. Occipital or visual.

In considering these different areas of the brain it must be remembered that in addition to the definite symptoms of their involvement the growths may, either by direct extension, or by pressure and occlusion of vessels, etc., affect the surrounding tissues, causing the so called distant or invasion symptoms. The early recognition of intracranial disease is made more important on account of the confusion caused by such generalizations of symptoms.

To avoid repetition such invasion signs will at most only be referred to in a general way when considering the different cerebral regions.

It is also important to remember that certain centers in the brain are more developed on one side and the left hemisphere, being the more highly evolved in right handed people, will give the most symptoms when diseased.

The higher psychical functions are almost entirely controlled by centers in the left frontal lobe and Mills refers to the probability of a greater development of emotional control in the right frontal lobe.

Similarly the centers for the higher functions of word hearing, music hearing, motor speech, word and number seeing, naming, etc., have their greater or their entire development in the left hemisphere.

Although the centers for word and number seeing are more developed in the left visual areas they are so largely represented in both hemispheres that, while a large lesion of the left angular area may destroy these functions, the loss will be only temporary, the opposite side compensating in a very short period.

The more primary centers, such as the primary visual areas of the cuneus, calcarine fissure, those for general hearing, and smell and taste are equally or almost equally developed on either side.

Sensation both superficial (pain, temperature and touch) and deep (muscle sense, etc.) is bilaterally developed; the centers for stereognostic conception, while bilaterally distributed are very likely more developed in the left parietal lobe.

1. Prefrontal or higher psychic area. This comprises the anterior portion of the frontal lobes back to a vertical line drawn through a point one half inch in front of the anterior branch of the

sylvian fissure. The higher psychic functions concerned in the intellectual life of the patient, abstract ideas, memory, etc., are controlled by these centers. Lesions, if on the left side, would interfere with the memory, the power of attention and concentration and cause a general mal-relation of the patient with his surroundings. Frequently a patient will show a tendency to make foolish and senseless witticisms, the so called Witzensucht of the Germans. Often tumors here by causing such profound mental deterioration or change may be mistaken for paresis; the speech affection may also resemble that present in paresis; generally, however, the other signs together with the previous history prevent such a mistake.

2. Mid frontal or intermediate psychic motor zone. This extends from the prefrontal region to the precentral convolution. It is the portion between the psychic area just described and the post frontal or motor region.

It contains centers for the finer coordinate movements necessary in the skilled trades, sports, etc., such as dancing, fencing, writing, various occupational movements, etc.

It is in a way a correlating center for the two adjoining areas. Movements of the head and eyes, particularly in their relation to the above movements, and motor speech, are also controlled by this portion of the brain.

Lesions here by destruction of the writing center in the posterior position of the second frontal convultion would cause agraphia; further interference with the eye and head center below and anterior to this would interfere with their conjugate movement and cause deviation of the head and eyes toward or away from the lesion according to its irritative or destructive character. Motor aphasia would be caused by the involvement of the motor speech area. The patient would be unable to form words or sentences, though able to understand things said to him. He would have a certain amount of agraphia but would be able to copy or take dictation to a certain degree unless the writing center already mentioned were affected; in that case the patient could not write under any conditions. All of these symptoms may occur in different degrees from very slight (paraphasias, paragraphias, etc.) up to completeness.

Extension of the lesion posteriorly would give motor symptoms from involvement of the rolandic area just as forward extension would give as invasion signs those of the prefrontal region.

3. Post frontal, motor or anterior rolandic area. This comprises the convolution anterior to the central or rolandic fissure, and posterior to the midfrontal area.

The functional development of this portion of the brain is bilateral, so that a lesion of one side will cause definite contralateral symptoms. Tumors occur quite frequently here and over the post parietal area and are often growths from the dura or periosteum and operable.

The symptoms would be of the motor type. A gradually, or slowly increasing unilateral paralysis has been shown by Spiller to be a very strong diagnostic indication of tumor of the rolandic area.

Jacksonian epilepsy is often a very early sign; this may become in time extended and resemble idiopathic epilepsy and on the other hand other things than brain tumor may cause Jacksonian convulsions.

The motor irritation symptoms are more often present in cortical growths. Where the lesion is subcortical these signs do not occur until late, when the growth begins to affect the cortex and other symptoms are present, caused by the subcortical destruction of the projectile fibres from neighboring brain areas. A Babinski sign occurs more often and there is greater spasticity in the subcortical growths.

The invasion and distant symptoms are those of frontal or parietal lobe involvement.

4. Parietal, post rolandic or sensori stereognostic area. The parietal lobe is here included back to the parieto occipital fissure and inferiorly to the sylvian fissure.

This region, one of frequent involvement by cerebral growths, particularly in its posterior section, contains the centers for superficial and deep sensation and stereognostic conception or the ability to recognize objects in handling them.

The superficial sensory areas are mainly in the ascending parietal convolution posterior to the central fissure and correspond approximately in their distribution to the motor areas; that is the sensory centers for the face are opposite the motor centers for the face in the anterior central convolution, etc.

Deep sensation, position sense and muscle sense, are situated more posteriorly in the superior and inferior parietal convolutions.

The centers for stereognostic conception are in the posterior portions of the superior parietal convolutions.

Sensory centers are also found on the mesial side of the brain, but will not be taken up, owing to their lack of importance in the symptomotology of tumors.

Lesions of the parietal lobe cause contralateral interference in various degree with the superficial and deep sensations and from the distance of the stereognostic conception center the patient will be unable to recognize objects placed in his hand. Probably this center is more developed in the left hemisphere, though not entirely unilateral.

Ataxia from the sensory disturbance, will be present and from this same cause the deep reflexes may be diminished or lost.

Subcortical growths here can only with uncertainty be distinguished from the cortical by their involvement of the converging projection tracts. Where later invasion symptoms are present in a cortical growth the resemblance to a subcortical would be too great to differentiate them.

5. Parieto-temporal, or visuo-auditory. This portion of the brain composed of the temporal lobe and the angular convolution is more unilaterally developed than the region just considered.

The centers for reception of ordinary sounds and noises are bilateral, while for recognition of words and music as such the centers are developed only on the left in the posterior and inferior portion of the superior temporal convolution and the upper part of the corresponding portion of the second temporal convolution.

Around the posterior extremity of the parallel fissure, in the gyrus angularis are the centers for the recognition by sight of words, objects, etc.

Lesions of one side (left in right handed people) would interfere with word and music hearing causing word deafness or sensory aphasia, amusia and anomia or the inability to name things (naming center is in the third temporal convolution). The angular gyrus being affected would cause a temporary word or number or object blindness if on the left, but owing to these centers not being entirely unilateral in development the opposite side would in a short period cause these symptoms to disappear.

This area of the brain is a frequent seat of brain abscess. If posteriorly to involve the angular gyrus or other active parts of the brain, being in the so-called silent area, it will cause no symptoms of localizing character, other than some deafness or ringing in ears, often mistaken for or covered by the previous disease of the middle ear or mastoid, the most frequent forerunner of the abscess.

6. Occipital or visual. The occipital lobes contain the primary visual centers. They are bilaterally developed in the cuneus and along the calcarine fissure.

Lesions of the occipital area, if in a position to cut off the fibres connected with these centers or destroying the centers directly, will cause homonomous hemianopsia on the side opposite the lesion; or quadrantanopsia if only certain portions are destroyed along the calcarine fissure. In an irritative lesion you may get hallucinations of sight; the patient seeing most fantastic shapes and objects before his eyes; horses, houses, strange combinations of things, etc. These may, according to some observers, be on the blind side while according to others they occur in the opposite field.

In the short time at my disposal I will not go into the discussion of the various forms of aphasia, mind blindness, etc., nor go into the consideration of growths of the hypophesis, pineal body, cerebellum or pons even in the brief manner in which I have presented the cerebral areas. In closing I would like to emphasize the great importance of the early recognition of intracranial growths.

While the percentage of cures by operation is not nearly so high as in abdominal surgery, this is partly due to the late recognition of the condition.

As the patient unless operated will invariably succumb to the

disease you have everything to gain and nothing to lose by operation.

Even where the focal symptoms are not sufficiently clear, or where they are too complex to enable one to definitely localize the lesion, a decompression will often do wonders toward the relief of the patient's most annoying and discomforting symptoms. The excruciating headache, the most unbearable of all the symptoms, usually disappears entirely and permanently. The rapidly increasing optic neuritis with the late interference with sight and ultimate blindness will rapidly subside. Usually ten to fourteen days are required for the beginning of the change, though Spiller mentions a case where the condition began to lessen within forty-eight hours.

If you can not locate a tumor and can only do a decompression the symptoms may be relieved for months or even years and if only for a few months this seemingly short period may be most important for the patient's family and himself.

Where an operable lesion is found the results are often most gratifying, a recurrence is not common, the symptoms, if the brain tissue has not been destroyed, will largely disappear so that the patient will live for years, at least until dying of some intercurrent disease.

CANCER OF THE UTERUS CLINICALLY CONSIDERED*

C. S. JAMES, M. D., Centerville.

Cancer of the uterus must be diagnosed early if the present means at our command are to show an increasing ratio in the percentage of cures.

There are but two facts by which an early diagnosis may be judged i. e: first, radical operative procedures must be followed by a lower mortality, and second, it must be shown that the duration of life is prolonged after such operations.

It is only when these ends are accomplished that one may be satisfied with his diagnostic standard.

It is obvious then, that the balance of power in improving the present status of the cancer problem by an early diagnosis lies in the general practitioner's hands, and depending on his diagnostic acumen will determine to a very major degree the success of the thorough operative procedure instituted.

Too long has one delayed if he waits for secondary manifestations of cancer, but to be productive of permanent good, the diagnosis must be made in the incubation period of the growth and not when it is an unbridled process enjoying its fullest activities at the expense of its host.

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*Read before the South Western Iowa Society, Sept. 10, 1914.

That cancer is prevalent to an alarming extent is evidenced by a recent insurance report that upwards of seventy thousand cancer deaths annually are recorded in this country alone.

Unfortunately but little progress has been made in cancer research despite the expenditure of millions of dollars and tons of highly organized brain matter.

The definite cause of cancer is still a dark mystery and but little that we do know of the disease is of practical value to the affected, and the only practical fact we can state to the patient, is when the cancer process is in a very early stage, and accessible for removal, it may in a large number of instances be permanently cured by surgical measures.

A review of the literature upon this subject affords ample proof that the surgeons have experiences which indicate that the general practitioner as well as many of the patients are not fully aware of its importance as evidenced by patients coming to them with late or advanced uterine cancer without a local examination having even been made, or, the patient being assured that her fears are groundless, returns home mentally relieved, and in time, when local symptoms and her general appearance urge her to again seek medical advice does her attendant make the long delayed investigation, and the patient is dismayed by the verdict "non-operative."

Clinically we recognize that cancer of the uterus is ofttimes so insidious in its outset that patients may present themselves with no marked symptoms yet the case having well passed the limit of safe operability.

This should not, and does not, excuse the general practitioner, but should constitute the goad that stimulates him to such an alert relation to his patients that such a lamentable condition cannot occur in cases with which he has been clinically related. When we, the general practitioners, the units constituting the clinical or advance line of battle against this dread enemy, fully awaken to our responsibilities, then, and then alone will there be fewer women between the age of thirty-five and fifty assured that her symptoms are due to "tis only only change of life"—"general debility" (a la Lydia E. Pinkham)—"ulcerated os"—"lacerated womb"—(with subtile allusions to the obstetric event attended by a rival colleague) —"congestion"—"leuchorrhea"—"irritable bladder"—etc. Then will we appreciate the necessity of the careful, painstaking, exhaustive "case history" and "physical examination" necessary to arrive at a dependable conclusion as to the presence or absence of early cancer.

If then the responsibility for the future developments in the early recognition and cure of uterine cancer rest upon us, the general practitioner, it may be wise for us to face the problem squarely and recognize some of the difficulties which lie in our path, and urge local examination in every suspicious case and refuse to accept any responsibility if the patient does not follow our advice.

Cervical cancer is five times as frequent as that of the body of the uterus, runs a more rapid course and involves the lymphatics and adjacent tissue earlier.

The growth may appear quite recent and circumscribed and yet metastases be present or may appear quite extensive and yet remain local.

When the disease is local it usually causes very little discomfort, no loss in weight, nor does it produce symptoms which appear at all serious and in fact severe symptoms seldom appear until after the period of inoperability.

The writer sincerely regrets his inability to give any definite symptom complex indicating the early occurence of cancer of the uterus but nevertheless nearly every patient presents some factor or factors in a thoroughly taken case history and examination that should direct ones attention if alert to its importance.

It is our duty to direct our careful attention to every woman patient between the age of thirty-five and fifty, the usual cancer period. The most trivial complaint, as discomfort in the pelvis or back:—watery discharge either acid, odorous, or staining in character, irritable bladder, vulvar pruritus, mid-period bleeding or slight spotting after coitus—should all separately or collectively receive very careful consideration and in fact it is well to view each case presenting any one of the above symptoms, during the cancer period, with suspicion until we are able to rule out the possibility of malignancy.

There is no one symptom occurring early in cancer of the uterus that is pathognomonic and any or all of the early symptoms may be explained away by the attending physician, if so inclined, to the temporary satisfaction of the patient, but beware: there is a day of reckoning. The time and character of these minor early symptoms will be vividly recalled by the patient when at a later date she is apprised of the progress of her disease to an inoperable stage.

Early diagnosis is of the greatest personal importance to the family physician, not only because of the increased benefit to his patient, but thus he avoids the merited criticism invariably made by the patients and their friends of his management of the case, if he has delayed or omitted to make an examination, when they find the disease has advanced beyond an operative stage.

Hemorrhage, odor and **pain** are all late symptoms in cancer of the uterus.

Bleeding may be an early prominent symptom but nearly always at its first observance a carefully taken history will reveal the presence of the disease for a period of several months.

Again, odor occurs only from decomposition or necrosis of tissue, hence, it can only be classed properly as a late symptom.

Probably a fourth of the death rate from this malignant but often painless disease is due to the ignorance or neglect of its early

symptoms, and another fourth to postponement and delay in seeking surgical relief after the disease is recognized, due to an unreasoning dread of the knife, or a mean spirited fear lest the surgeon should operate unsuccessfully.

One may differentiate cervical cancer early in its inception:

From cystic degeneration, by the number of small hard round mucus containing cysts without change in appearance of the overlying mucus membrane which characterizes cystic degeneration.

From erosion by instead of a localized area giving the characteristic feeling of a lump and friability to the examining finger, there is a generalized eroded condition all feeling similar and under inspection bleeds less freely than in carcinoma.

Tuberculous ulcer is so rare that the presumption would be in favor of malignancy and chancre possesses such definite and familiar characteristics as to not confuse.

A valuable observation in carcinoma of the cervix is the immobility of the overlying mucus membrane a condition that is not present in any other pathological state with which it might be confused.

Carcinoma of the body of the uterus lends less facility of recognition yet if attention be paid to the peculiar watery irritative discharge, the little bleeding, the possibility of its occuring in maidenhood, the occurrence of pruritus, there should be no insurmountable difficulty in arriving at a timely diagnosis.

You note I have omitted any mention of the use of the currete and laboratory examination of the scrapings or excised block of tissue.

Of this omission I plead guilty and advance the views that:

First:—The value of the laboratory findings rests primarily upon the selection of the right minute particle of tissue involved to have the findings prove of value and exactly as it is in examination of tubercular sputum a positive result is of value, a negative of no value.

Second:—Pathologists discredit the parasitic nature of cancer but surgeons either in their views or by their operative methods strongly support this theory, and until such time as it may be disproven one is making a grave mistake in curretting or wounding a cancer until preparations have been made for immediate destruction or removal and thus avoid any possible implantation or needless dissemination.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

EDITORIAL

Workingmen's Compensation and Industrial Insurance.

Inquiries are being made as to the operation of the Employee's Mutual Causalty Association, and as to the wisdom of contracting for the service. Our advice is not to enter into a contract for the fee bill offered or for any other fee bill. We see no objections to accepting the services under the fee offered or for a physician accepting the position of surgeon to an industry for a fee less than the fee ordinarily paid for a similar service, but to enter into a contract is quite another and much more serious matter. The profession has for years objected to doing county practice under a contract until now only in some of the more backward counties does this practice exist. The contracting for lodge or poor practice is detrimental to the interests of all parties concerned. It demoralizes the doctor and if he is conscientious makes him the hopeless and helpless servant subject to intolerable exactions on his time and patience; his convenience, or his manhood, for the contract doctor is generally looked upon with contempt by the better class of lodge members and by the county officers who award the bids. It is generally felt that a contract doctor is an inferior kind of medical man who can only hold his own by entering into a cheap kind of monopolistic arrangement. Prof. E. H. Downey in his outline of Work Accident Indemnity in Iowa, published in the Iowa Economic History Series, entirely mistakes professional conditions in the state when he says "Free choice of physicians by the victims of work accidents is more likely to promote quackery and imposition than to serve any legitimate end." This shows a condition of mind and knowledge of facts to be deplored by one who undertakes to guide economic conditions in Iowa. If the Commission appointed by the Governor to collect information, had seen fit to call before it some of the leading men in the medical profession of Iowa, an extremely embarrassing situation could have been avoided. The contract Prof. Downey no doubt had in mind will in large measure deprive the working man of the most efficient service. So far as we have been informed no one of the higher grade medical practitioners will enter into this unwarranted contract scheme. The ruling of the Industrial Commission has in great measure relieved the situation by interpreting the law to mean competent and skilled service when intelligently selected by the injured employee. A very serious complication still exists in providing for only two weeks service. Until this period is extended to at least 60 days we do not believe efficient service can be secured at less than

the local fee bill rate. To illustrate this point we will relate a personal experience.

We were called to attend a fractured leg in a patient whom we found a few days later to belong to the industrial classes, and came under the operation of the new Workingmen's Act. This knowledge came to us when two Mutual Casualty contract doctors claimed the patient. We had innocently assumed the care of the case and could not safely abandon it without the patient's consent, which he refused to give, and for the double purpose of guarding against a possible

malpractice suit and to more fully inform ourselves as to the workings of the law, we continued to treat the case. When we examined the leg we found multiple fractures of the lower ends of both tibia and fibula, the fracture probably extending into the ankle joint. A gloomy prognosis was given as to the future function and use of the joint in the presence of witnesses; two other physicians were called into the case and two radiographs made which we reproduce here.

Aside from the risk of a malpractice suit, the amount of service necessary can be easily seen. The compensation under the Commissioners' fee will be, assuming an allowance for a compound fracture, about $26.00. Expenses:—two x-rays $10.00; consultation of two other surgeons as a reasonable assistance, and personal protection, $10.00=$20.00. Fee allowed $26.00—$20.00, a total of $6.00 for three or four months care unless the workman makes an allowance from his own pocket which is not at all probable with perhaps a possible additional allowance of from $3.00 to $8.00 for x-ray examination. No comment is necessary.

In addition to the objections to the contract feature of the Casualty Company and the objection to fees arranged for, is the risk of malpractice suits. It is estimated that the risk will increase by 1-3 or 33 1-3 per cent. We cannot be sure of this, but it is very clear that under the law if a workman is dissatisfied with the award, his only recourse is to sue the doctor.

We are in full sympathy with the general plan of Workmen's Compensation under state regulations, but we do not believe satisfactory results will be obtained until there is a better understanding with the medical profession. At first sight the doctors will most likely object to some of the provisions of the law and to the amount of compensation allowed, but after a more careful consideration, views may be modified. The success of the work must depend on the question of efficiency of the medical and surgical service, and this cannot be secured without dignifying the service. In the first place the contract feature must be eliminated. In the second place the attending surgeon must be the judge of the means of treatment to be used. If in the doctor's opinion an x-ray examination is needed he should not be required to wait until the question can be submitted to a board of non-experts to pass on the necessity of such examination; far better for the doctor would it be to have the examination for his own protection against a possible malpractice suit. This contingency should be uppermost in mind unless he is guaranteed against such an ever-present possibility. Such a guarantee may well be regarded as against safe public policy. What the medical profession should do is to take a firm stand against any scheme of Workmen's Compensation which eliminates them from a fair participation in maturing a plan of operation. We should not antagonize the general principles involved, but endeavor to do our part in perfecting the details of a plan that will work to the good of all concerned. Let us lay aside some of our pretty rancors and jealousies and be public utility workers for a while, and impress the public with the idea that we are something more than dispensors of pills and powders and repairers of bruised fingers and toes.

Nursing as a Profession.

Dr. Douglas Head of Minneapolis, makes some severe strictures on the trend of nursing at the present time. We apprehend that the thought which Dr. Head points to is improper training. The nurses in many of the training schools pass through a somewhat severe ordeal and have imposed upon them too many menial duties. We are of the opinion that the hospital management does not make any serious effort to inspire girls in training for nurses with the higher ideals, and so the nurse comes out of the school thoroughly imbued with the idea that she is working for money chiefly. I think some of the criticism we make of the nurses should be transferred to the training schools that send them out.

We give a few abstracts from Dr. Head's paper that are really worth considering.

"The trend of nursing at the present time is toward specialized-labor standards. The true professional spirit is being lost sight of. The present idea of service is that of so much skilled work for so much pay. Loyalty to high ideals is being disregarded. The noble spirit of charity and self-sacrifice, which has come down to you from Florence Nightingale, and which should be the guiding principle of your life work, is dying out. I say this is the tendency; the actual condition has not arrived, but your profession is rapidly approaching it.

A noble profession does not demand rights and privileges irrespective of the condition under which the service is rendered. Why should the nurse demand her regular rest hours in a household where the mother does her own work, and there is a family to care for? I have seen a nurse leave a patient with pneumonia approaching the crisis, in order to secure her three hours of relief, with no one to take charge of the patient except some member of the family. I have seen a nurse leave a nervous woman with no one to look after her except the servant girl, in order to secure her rest hours. The patient herself was on a rest cure; every hour that the nurse was away from the patient was torture, and served only to make the patient worse.

Nurses, of course, should have relief from their work. I thoroughly believe in this. I do not think it is necessary for them to always take their rest hours at the same time each day, provided it interferes with the regime in the sickroom. Neither is it necessary to take a rest hour every day without regard to the condition of the patient or the circumstances in the household.

In the third place I note the increasing tendency on the part of nurses to refuse calls unless all of the conditions are suitable and agreeable, and the requirements pleasing to them. It is not unusual in my experience for nurses to refuse to answer calls because of lack of modern conveniences in the home, or lack of servants to do the work, or because the case is one of tuberculosis or typhoid fever.

There is a growing tendency on the part of nurses to refuse to do anything about the household except the actual work in which they are engaged in the care of the sick. This is a perfectly justifiable position for a nurse to take in the homes of the well-to-do and rich classes. A nurse with high professional ideals, working in a home where there is lack of proper assistance, will, when necessary, give any kind of service, in order to make things go smoothly, especially if it is necessary to relieve the anxiety and care of a sick mother. I frequently hear people say, "I do not want a professional nurse; if she comes we must have someone else to wait upon her."

The Boston Medical and Surgical Journal to Become Affiliated With the Massachusetts Medical Society.

The Massachusetts State Medical Society has been one of a few large state organizations that has been without a state jornal, and while the Boston Medical and Surgical Journal is not the property of the State Society, yet a step has been taken in that direction by an affiliation which we give below:

"On April 10, 1914, the Boston Medical and Surgical Journal passed into the hands of new owners. On June 10, 1914, the Council of the Massachusetts Medical Society adopted the recommendations of its Committee of Nine, looking toward an affiliation between the Massachusetts Medical Society and the Boston Medical and Surgical Journal."

"We, the new owners, desire to express our appreciation of the confidence thus shown in the new management, and assure the members of the Massachusetts Medical Society that we will make it one of the chief concerns of the Journal efficiency to serve the Society, whose official organ it will thus become. We feel that with this association the first step has been taken toward enlarging the scope of the journal."

"We recognize the dignified position which this, the oldest weekly medical journal in America, has always held. Our purpose is to maintain this position of dignity. Our hope is that in the future the Journal may become the most important medium of expression for scientific and clinical medicine in the East, and with courage and timeliness may serve the needs of the community."

"Our predecessors in ownership accepted the Journal as a trust, deriving no personal profit therefrom. We, in the same spirit, agree to devote to the realization of those hopes we have expressed, any revenue above expenses which the Journal may afford."

"We shall welcome criticism of every sort and from all sources, and we ask the help of all those who have the best interests of medicine at heart."

Joel E. Goodthwait, M. D.,
Edward C. Streeter, M. D.,
Hugh Williams, M. D.

Rockefeller Institute for Medical Research.

Mr. Rockefeller has recently donated $2,550,000 to this institute. A part of this money will be used to acquire additional land where the buildings now stand between 64th and 67th Sts. on Ave. A., extending through to East River, making altogether four acres. This gift of $2,550,000 is in addition to a special fund of $1,000,000 which Mr. Rockefeller has provided in order to establish a department of Animal Pathology. Dr. Theobald Smith, Professor of Comparative Pathology in Harvard Medical School is to be the director of the new department. Mr. Rockefeller's previous gifts to the institute have amounted to about $9,000,000 exclusive of real estate in New York City, so that the endowment will approximate $12,500,000.

The Rockefeller Institute is now the most amply endowed institution for medical research in the world. In addition to the laboratories there is connected with the institute a hospital with every important facility for the treatment of patients afflicted with disease at the time under investigation. A number of the leading scientists of the world are now devoting their entire time to medical research at the institute. All discoveries and inventions made by any person while receiving compensation from the Rockefeller Institute, become the property of the Institute to be placed freely at the service of humanity.

To the Editor of the Iowa State Medical Journal.

I am sure the members of the Iowa State Medical Society will be interested in the condition of the College of Medicine at the State University. Hence this note.

The forty-fifth year of the College of Medicine opened on Monday, September 21. The following table shows the number of students in the College this year as compared with last:

Students	1913-14	1914-15
First year	34	61*
Second year	35	26
Third year	26	29
Fourth year	13	22
Unclassified	1	
Total	109	138

*Not all registered.

The number of instructors in the college is 48. But few students have left the College of Medicine except those who have failed or have been unable to continue work. On October 15 the new wing of the hospital will be completed. When it is complete the number of beds in the University Hospital will be 317. 14 of these beds will not be available for patients until the 1st of January, 1915, when the nurses' home will be completed. The nurses' home is now in the

process of construction. It is to cost $55,000 exclusive of grounds. It is expected to be completed by January 1, 1915. The Council on Medical Education of the American Medical Association ranks the college as an A plus school. It is interesting to note the increase in the size of the freshman class, notwithstanding the fact that our requirements for admission are higher than the requirements for the Council on Education for the American Medical Association for A plus schools.

I am, Yours very truly,

L. W. DEAN.

If you are in the market for a good typewriter, consult the advertisements in this issue and order as directed. Unless this ad brings results, it will not appear again, so act at once. We call attention again to all of our advertisements, study them and buy as you need, telling the advertiser that you saw the ad in your own Journal. All of our advertisers are strictly reliable and are worthy of your patronage. We have refused a half dozen good paying ads just recently because they were not up to our standard.

Have you sent the coupon to the Uncle Sam Breakfast Food Co? Lood this ad over. The preparation offers you something of distinct value in the treatment of constipation—a laxative food. Give it a trial.

Have you looked over the professional cards? Every physician who has his card there is worthy of your consultation. These pages mean much to you in the choice of a consultant.

The x-ray is now one of the most necessary parts of your equipment. For a first-class serviceable machine, investigate the Vulcan Coil as advertised on the third cover page.

MEDICINE IN IOWA PRIOR TO 1876

D. S. FAIRCHILD, M. D.

Delia S. Irish, M. D., of Davenport.

Delia S. Irish, M. D., was born in Franklin county, New York, July 24, 1842, and, hence, at the time of her death was over thirty-five years of age. When three years of age her parents removed with her to West Bend, Washington county, Wisconsin, where her childhood and girlhood were spent.

After her graduation she taught in the vicinity of her home. Coincidently she commenced the study of medicine (for which for some years she had evinced a decided taste) under the direction of Drs. Hays & Hunt, of West Bend.

Subsequently she went east and attended her first course of lectures at the Woman's Medical College of Philadelphia. On her return to the west she removed with her parents to Davenport, Iowa. Here she continued her studies under the guidance of Dr. John Bell. Her next course of lectures was at the Woman's Medical College, graduating therein in the spring of 1868.

After graduation she returned to Davenport with the expectation of entering upon private practice. She remained here but a short time, however, returning east in the spring of 1869, to accept the position of junior assistant in the New York Infirmary for Women and Children. After the lapse of a year she was made senior assistant in which capacity she served for six months. At the expiration of that time she became unable to do the necessary night work, owing to ill-ealth, and resigned her position.

In the autumn of 1870 she went into the Stranger's Hospital, of New York City as druggist, where she remained for two years. Continued ill health demanded a change, and, resigning, she returned to Davenport in the fall of 1872. Shortly after her return she engaged in active practice in which she continued almost to the day of her death.

Passing the necessary examination, she received a certificate from the New York Board of Examiners for Licensing Druggists and Prescription Clerks, in October 1871. In June, 1872, she was admitted to membership in the City and County Medical Society of New York. In February, 1863, she became a member of the Scott County Medical Society, being the first lady admitted to membership in either of these bodies. In January, 1877, she was elected a member of the Iowa and Illinois Central District Medical Association.

An attack of pneumonia in the spring of 1872, from which she did not make a good recovery, followed by several severe pulmonary hemorrhages, inaugurated a condition of bodily health and strength by no means adequate to the demands made upon her. By the utmost prudence and care, however, she so managed to conserve her vital powers as to enable her to pursue the practice of her profession. Fearful that her frail physical condition would give rise to the criticism so often made—that of woman's physical unfitness for the practice of medicine—she was very frequently led to go beyond her strength, caring not so much because of personal remark as the possible untoward influence it might have on the minds of some in regard to her sex in the profession. Nature finally rebelled at the undue tax made upon her. In April, of 1877, while in attendance upon professional duties requiring more than ordinary care and attention, she became excessively fatigued and contracted a severe cold from exposure. Disease, which had before been quiescent, was lighted up anew and progressive throughout the year culminated in her death of consumption, May 7, 1878.

Although the last year of her life was one of continual pain

and suffering, weary days and sleepless nights, yet she continued in active practice until a week before her death. Then she only gave up at the earnest solicitation of friends and went to the country in hopes that the change and rest, the freedom from care and work, might enable her to rally and gain strength. The change she hoped for came not, but a more blessed change, that of perfect rest. Knowing that her disease was mortal, and painfully aware of the tendency to linger a helpless, useless burden, she would often say to the writer "I shall be content if I may only have strength to work until the last."

She held views the most liberal, and while believing in no church or creed lived a most correct and Christian life—a life replete with all the Christian graces. She was a woman of culture and refinement; was well and widely read. Of pleasing, person and winning address, she commanded the admiration and esteem of all who knew her, and made friends firm and enduring. Those of whom she had professional care felt, when the sad news of her death came that they had lost a dearly loved friend as well as a trusted physician. To the poor—especially, was she kind, giving her services without stint and with no hope of remuneration. Those is whose employ she was while East say that she was ever diligent, and faithful in the performance of her duties, giving general satisfaction.

Early imbued with a love for, and a desire to study medicine, believing in woman's inalienable right to choose for herself congenial work even though outside of routine paths, and impressed with woman's fitness for, and place in the medical profession, she bent every energy to the accomplishment of her purpose. None knew save herself all she had to contend against. Efforts were made to dissuade her from her purpose but listening to none she steadfastly pursued her way surmounting every obstacle that presented itself.

Just, however, as she had begun to reap the reward of years of toil, she was cut off.—By M. Abbie Cleaves, M. D., Davenport, Iowa.

L. L. Butler, M. D., of Muscatine.

Lawrence L. Butler was born in St. Louis, Mo., March 2d, 1857. His education was commenced in the public schools of Muscatine, to which place he came in 1855.

In 1868 he commenced the study of medicine with B. W. Thompson, M. D., and attended his first course of lectures in the Miami Medical College at Cincinnati, Ohio, in 1869-70, at the close of which he remained the private student of Dr. Bartholow, one of the faculty for a short time. A change in the financial circumstances of his father at this time rendered it necessary that the son should give up his studies for a time. Returning from Cincinnati he accepted the position of fireman on a railroad locomotive, employing his leisure hours in the prosecution of his medical studies. In this occupation he remained until he had saved money enough to meet the expenses

of another course of lectures, which he took in the Medical Department of the Iowa State University, 1874-5. The summer of 1875 he spent mainly in the office and under the instruction of Dr. W. S. Robertson of Muscatine, returning to the University in October, graduating March 1st, 1876. He at once entered upon the practice of medicine in Muscatine, with encouraging prospects of usefulness. His health, never robust, soon showed signs of failure and in November, 1877 he was taken down with pulmonary disease and died December 27th following, age 26 years, 9 months and 25 days. Those who often met our young friend knew well his manliness and dignity of character. He was an unswerving friend, a devoted son, an affectionate brother, and a most notable young man. He was a close student, possessed a fine memory and matured judgment. He was a member of the Iowa State Medical Society and of the Muscatine County Medical Society.—By W. W. Grant, M. D., Davenport.

Henry Osborne, M. D., of Council Bluffs.

Dr. Henry Osborne died at his home in Council Bluffs, June 25th, 1880, of septicemia, growing out of a wound of the left index finger received in operating for necrosis some days previously.

He was born near McConnellsville in Morgan County, Ohio, Jan. 29th, 1830 and hence at the time of his death was a little over fifty years of age. He spent the first years of his life on a farm, where at twelve years of age he received while at school an injury to the left femur, which crippled him for more than a year. This accident or rather the disability resulting from it obliged him to seek comfort in books, reading all he had and borrowing all he could. In after years when overworked and suffering pain in the injured leg he would say to his wife "Well I ought not to complain, for that accident was a blessing in disguise. Doubtless I never have been of any account in the world if it had not been for that."

In his eighteenth year he commenced teaching school, and about this time began his studies preparatory to his profession. In 1852 he came to Iowa, stopping in Wapello county, and for two years was engaged in farming, and in 1855 resumed his medical studies in the office of Dr. E. C. Atkinson of Dover, in Lee County. He took the degree of M. D. at the College of Physicians and Surgeons, of Keokuk, in 1857. Returning to Dover he engaged in practice with his former preceptor, where he remained until the autumn of 1862, when he entered the Military Service as Contract Surgeon, first at Keokuk and afterward at St. Louis. In January, 1863, he was commissioned Surgeon of the 3rd Missouri Infantry Volunteers, and remained with his regiment until the close of the siege of Vicksburg. During the siege he had charge of Col. Wood's brigade hospital. At the fall of Vicksburg Dr. Osborne was ordered to report to Col. Shephard, acting brigadier general in charge of the organizing of colored troops at Milliken's Bend and other points in Western Louisana,

the doctor to rank as acting surgeon of that command. In this capacity he was in and around Vicksburg about two years. In the spring of 1865 he went to New Orleans with the command of Gen. Hawkins and shortly joined Gen. Steele, who commanded a column which operated against Mobile. There Dr. Osborne was chief of one of the operating corps during that siege, and soon after its close he returned to New Orleans. He remained in the vicinity of Alexandria until June, 1866, when with other officers he was mustered out.

Few surgeons made a more honorable record during the war of the Rebellion than did Dr. Osborne. A few months after being mustered out he settled in Council Bluffs, where he remained in the practice of his profession until his death.

He was a man of fine natural endowments which had been improved by severe study and large experience. With unbroken consecration his life was devoted to his profession. Having elected this as his life work he steadfastly refused to be diverted from it. He would not accept civil office of any degree. He held that no man could do justice to his profession and meddle with civil affairs further than to vote on election days. It is difficult to say in what department of his profession his best success was attained, for he was more than ordinarily successful in them all. If he showed a preference for any one over another, it was for surgery. Although he made no operations that would distinguish him above other good surgeons of the time nevertheless achieved an enviable reputation for the successful treatment of the manifold and multiform cases that sometimes fall to the lot of the country surgeon.

The doctor was president of the Council Bluffs Medical Society at the time of his death. He was also a member of the American Medical Association and of the Iowa State Medical Society, and by appointment of the president was a member of the committee on Necrology for the 8th Congressional district.

The Iowa State Medical Society was Incorporated 1868.

The following are the Articles of Incorporation of the first Incorporation. (Of the original incorporators only one survives, Dr. A. G. Field, Des Moines.)

"Article 1. Know all men by these presents: That we, Edward Whinery, J. W. H. Baker, William Watson, Seneca B. Thrall, A. G. Field, and H. L. Whitman, persons of full age, and citizens of the state of Iowa, and of the United States, hereby associate ourselves, our associates and successors, for the purposes hereinafter stated: and become incorporated as a body politic and corporate under the name and style designated below, claiming all the rights, powers, immunities, and privileges, created, granted, and conferred by the virtue of Article three (3), chapter fifty-five (55), of the Revision of 1860.

Article 2. The name by which said body corporate or society shall be known in law is, the Iowa State Medical Society.

Article 3. The business and object thereof shall be the promotion and elevation of medical science in the state of Iowa, the advocacy of such measures as will tend to alleviate the sufferings of humanity, improve the health, and protect the lives of the community.

Article 4. The business of the society shall be conducted, and its annual meetings held, at Des Moines, Polk County, Iowa.

Article 5. The affairs and business of said society shall be conducted by seven trustees, to be annually elected by the members of said society, at such time and manner as provided by its by-laws.

Article 6. The names of the trustees of said society for the first year shall be Edward Whinery, of Ft. Madison; J. W. H. Baker, of Davenport; William Watson, of Dubuque; S. B. Thrall, of Ottumwa; and A. G. Field, and H. L. Whitman, of Des Moines.

In witness whereof we have here written our names this 6th day of February, A. D., 1868:

1st Congregational District, Edward Whinery.
2nd Congregational District, J. W. H. Baker.
3rd Congregational District, William Watson.
4th Congregational District, S. B. Thrall.
5th Congressional District, A. G. Field and H. L. Whitman.

State of Iowa, }
Polk County, } ss.

Before the undersigned, a notary public in and for said county, personally came the above named Edward Whinery, J. W. H. Baker, Wm. Watson, S. B. Thrall, A. G. Field and H. L. Whitman, who are personally known to me to be the identical persons whose names are subscribed to the foregoing certificate of incorporation as corporators, and acknowledged the execution thereof to be their voluntary act and deed, for the purposes thereof stated. Witness my hand and notarial seal this 6th day of February, A. D., 1868.

F. M. Hubbell,
Notary Public, Polk County, Iowa.

Dr. Peck moved that the articles of incorporation, with the petition of members of the society, be presented to Dr. J. M. Robertson, a member of the state senate, and also a member of this society, with the request that he would present them before the general assembly, and take such action as is required by law, to render the society a body corporate to law,—motion carried.

The second Articles of Incorporation were filed in 1908 and published in the Iowa Medical Journal for the same year.

There were no minutes of the 1867 meeting preserved but six papers appear to have been read, including the address of Pres. J. W. H. Baker. The meeting was held in Davenport, May 22, 1867.

Dr. Baker almost at the beginning of his address, takes issue

with one of the "best medical authors" who announced the fact that medicine had taken her position of one of the "exact sciences." Dr. Baker in setting forth his views on the efficacy of medicine states that "few diseases are submitted to the empire of medicine; that is subject to the full and positive control of medicinal agents" and credits the homeopaths with proving this. Dr. Baker could not reconcile himself to accept a resolution adopted by the Americal Medical Association to "acknowledge the fellowship of the educated female practitioner" and enters into a rather lengthy argument against women doctors.

At the meeting of the Society in Des Moines Feb. 5, 1868 a contract was made with Dr. J. C. Hughes to publish the proceedings in the Iowa Medical Journal "in an acceptable manner for one dollar and fifty cents per page at which rate he has caused to be published seventy-two pages of the proceedings of the last meeting (1867) amounting to one hundred and eight dollars."

It appears that the transactions of the earlier meetings of the State Medical Society were published in the Western Chirurgical Journal, the Iowa State Medical Journal published in Keokuk, and other medical journals. Only 29 papers appear in the Transactions of the State Medical Society, from 1850 to 1871.

The transactions for the 20th, 21st, 22nd, and 23rd annual meetings were published in a volume issued in 1876 of 224 pages.

It appears that the other expenses of the Society for the past year (1867) were $61.75.

Dr. Wm. Watson in his presidential address, spoke hopefully of the future of the society. The attendance of this meeting was twenty, and one can plainly see the evidence of improvement in the means of transportation which he thinks will be helpful in bringing together larger numbers of members. At this meeting Dr. Watson moved a vote of thanks to the Western Stage Company and to the various railroads for a reduction of the usual rate of fare.

In his President's address 1868, Dr. Watson says, "As this sixteenth annual meeting forms an epoch in its history as the first ever held at the State Capitol, let us regard it as an indication of the realization of our long cherished hope that the influence of our Society is being extended and that it will continue to extend until it shall be felt over the entire state and at each succeeding meeting, all parts of the state shall be fully represented. Characterized as this meeting is by circumstances of peculiar interest, perhaps no subject would better occupy our attention than a hasty glance at the past history and progress of the Society; the difficulties it has encountered, the results accomplished, its present prospects and the obstacles which yet remain to be overcome; seeking by a comparison of the past with the present to learn lessons and derive encouragement for the future."

"Our society has done much good by promoting acquaintance

and awakening cordial friendship among professional men residing in distant sections of the state, an acquaintance that was of great importance in organizing to perform the part assigned to the profession in the stirring events of the past six years. It can be said without boasting, or fear of contradiction, that the profession of no western state have left a better record, or have been more faithful and untiring in the discharge of duty. The annals of every bloody field chronicle the heroic deeds of Iowa soldiers. So do the records of positions requiring executive ability, judgment, integrity, and professional skill, show a prominent list of names taken from the "Iowa Surgical Staff," while the honored names of Reeder, Whitter, McGugin, Fiske, and others are among Iowa's martyred heroes."

"The existence of this society has infused new life into some old, and stimulated the formation of many new, local societies. It has also secured the preservation of the records of many important cases and facts. From a careful examination of the past, with a full appreciation of the difficulties encountered, the results appear eminently satisfactory."

"One great difficulty of the past, now partially removed and rapidly disappearing each succeeding year, has been the want of direct, speedy, and economical means of communication between different sections of the state; another has been the migratory character of the meetings, which has resulted in but a limited number of the same men being brought together at successive meetings; yet notwithstanding these unfavorable influences, it has made substantial progress in the accomplishment of its objects, and every friend of the thorough organization and progress of the profession should give it his cordial support, and determine with renewed energy, that succeeding years shall be characterized by more marked results than did the past. As I have remarked, a survey of our present position as a state organization, with a view to its future action and influences, reveals much to stimulate and encourage us. It also discloses well founded claims to sympathy and assistance in our voluntary labors, the results of which, if judiciously employed, will be of decided benefit to the state."

"In addition to the increased and rapidly increasing facilities of communication, the tendency of recent events has been to greatly extend the acquaintance of many members of the profession, and awaken a common interest among those engaged in kindred investigations which cannot fail to excite to increased diligence in observing, and accuracy in recording the results of their observations."

"While serious obstacles to our progress have been overcome there are others still existing which require earnest, continued efforts, for their removal. Some of these pertain directly to the profession, and the remedial influence must be exerted directly upon its members, by creating a sentiment among them which shall be sufficiently powerful to bring all who aspire to an honorable position

up to its standard of professional integrity. I am aware there are croakers and old foggies who will maintain such expectations are Utopian and never to be realized. I think any intelligent observer who has watched the progress and success of the efforts of the American Medical Association for the past twenty years will anticipate more favorable results; besides, these croakers are usually those who have seldom attended a meeting, unless it came to their doors, and are not active members of any medical organization. There is another class of difficulties which pertain more directly to the people, and so far as they involve the rights of the uneducated, the afflicted, and the helpless, they are proper subjects for legislative action.''

''Another subject which is worthy of the attention of our lawmakers, is the establishing of some system of collecting and preserving the vital statistics of our state, by general and uniform registration of births, marriages and deaths, with the essential facts pertaining to each. The importance of such a provision will become more apparent as we increase in population and wealth, and upon the ground of self-intrest alone.''

''Many cases involving this subject already exist in the older states, and many more are sure to arise among our foreignborn citizens. The laws of England determining the descent of property recognizes the right of every child born alive,'' and our laws on this subject are modeled after theirs.''

''But independently of the advantage resulting directly or indirectly to individuals, when we reflect that a healthy able-bodied adult population are essentially ''the state,'' and the more perfect and numerous are the models in this respect, among her people, the greater are possessions of the real elements of wealth and power, we shall fully realize that it is the duty of the government to know how nearly her population approaches the highest standard; also, to use every means in her power to promote the most healthy and efficient condition of her people. The ability to determine clearly the relative fecundity and mortality of her people; the relative proportion of the sexes among her population; the longtivity of her citizens; the causes of deaths within her borders; the weight with which each cause of death acts upon different portions of the community, whether considered in relation to age, sex, or condition, or in relation to different sections of her territory; these and many other facts to be derived from the same data and indispensable to a correct application of the principles of social and political economy.''

Hospitals Held Liable in Suits.

Rule adhered to by courts changed on account of attitude of hospitals. Immunity no longer. Courts in various parts of country refusing immunity to hospitals for negligent and careless treatment of patients.

This rule which has been adhered to by the courts in relation to suits for damages against hospitals, is being changed on account of the changed attitude of the hospitals themselves. We called attention recently to a decision of the supreme court of Minnesota, and we are calling attention to the ruling of the supreme court of South Carolina rendered to the Minnesota case, but which had escaped our attention. The change in the attitude of the courts is certainly right as it fixes the responsibility where it really belongs. Many hospitals on account of the immunity afforded by the ruling of the courts, have disregarded the ordinary rights of humanity and have seemed to feel that in some way they were exempt from the ordinary rules of right conduct.

Against Hospital.

Below will be found the opinion of the supreme court of South Carolina in relation to the liability of hospitals.

Strong Declaration of Liability Against Hospitals With Charitable Foundations.

(Lindler vs. Columbia Hospital of Richland County, S. C.), (81 S. E. R. 512).

"The supreme court of South Carolina affirms a judgment for damages in favor of the plaintiff, who was burned on a hot-water bottle. The court says that this is the first case in that state on the question: Is a hospital with a charitable foundation liable to patients for injuries caused by the negligence of the employees?

It has been stated that the doctrine of immunity from damage suits originally arose in cases in which hospitals were operated by government agencies. If the doctrine had been confined to its original declaration, there would have been no trouble; but, when the exempting circumstances do not exist, the immunity ought not to exist. The result of these holdings is that, when a small charitable foundation is secured, a hospital may be opened; patients secured, who go there under an invitation that promises skilled physicians, competent trained nurses; advantages promised that cannot be secured at home; then, when the patients are secured, they may be neglected, burned with fire or vitriol, put into beds from which other patients afflicted with contagious, loathsome, and it may be disgraceful diseases have been taken, and we are told that there is no remedy except to sue, though the injured party may be poor, overworked, broken down friendless, helpless woman.

"The court is not reflecting on the defendant hospital; it is ready to believe that the injury here was simply one of those acts of inadvertence that sometimes befall the most careful of men and women. The thing against which it protests is the absolute immunity, given to all hospitals that can secure a charitable foundation, from the most brutal and inhuman treatment of those unfortunate men and women who may be carried (sometimes without their knowledge or consent) within the hospital walls, under an implied contract. Some of the cases hold that the pay patients, when they enter a hospital with a charitable foundation, are really charity patients, and the weekly sums they are required to pay are not payments at all, but contributions to the charity fund. This is brilliant, but is not convincing.

"This court thinks the first duty of every man and the first call on every fund, is to repair the evil of its own doing, and then the remaining fund or remaining strength may be devoted to charity. The court does

not think it wise or safe to allow an institution to exist with unlimited power to do evil, and make that institution powerless to repair the evil, because some good man or woman has contributed a fund and intended thereby to do good. The court knows that a trust fund cannot be diverted to a different purpose from that for which it was created; but the purpose of the trust is to relieve suffering, and not to increase it. When, in the administration of the trust, suffering is increased, the purpose fails. The courts that declare immunity are destroying and not maintaining the trust."

Advertising Business Purifies Itself.

The "Printers' Ink bill" for the regulation of advertising, prepared originally by the Printers' Ink Publishing Company, has now been passed by twenty states, eight of which (Ohio, Washington, Rhode Island, Minnesota, North Dakota, New Jersey, Nebraska and Louisiana) have adopted the model bill verbatim. In the other twelve, Connecticut, Indiana, Iowa, Maryland, Massachusetts, Michigan, New York, Oregon, Pennsylvania, South Dakota, Utah and Wisconsin) the model bill has been amended by the addition of the word, "knowingly," or "willinging," which materially weakens the measure. The bill has been passed by the legislature but vetoed by the governor in Maine and Colorado, defeated by the legislature in Virginia, Missouri, California, Kansas and Illinois and unfavorably reported by the committee in South Carolina. This bill was endorsed by the House of Delegates of the American Medical Association in Minneapolis in 1913. It is short but effective, providing that any person or organization making any false statement in advertising any goods for sale shall be guilty of a misdemeanor. A bill similiar in intent but different in phraseology has been introduced into the House of Representatives by Mr. Kreider of Pennsylvania. This bill, known as H. R. 11016, makes it a misdemeanor for any person or organization to knowingly make or disseminate any statement concerning the quantity, quality, value, merit, use, present or former price, purpose or motive of a sale security, merchandise, articles, commodity or services, or concerning the method or cost of production or manufacture of such articles or the manner or source of purchase of such articles that enter into interstate or foreign commerce which is untrue or calculated to mislead. Mr. Kreider's bill also includes the weakening word, "knowingly," presence of which makes it necessary to prove actual knowledge on the part of the advertiser in order to secure conviction. The adoption of the Printer's Ink bill or its equivalent by Congress and by all of our state legislatures will mean a new era of business honesty. The Journal of the American Medical Association says, in a recent editorial, that it is primarily interested in securing honest methods and products in its own peculiar field, namely, that of medicinal preparations offered for sale either to the medical profession or to the public. Honesty in business, however, is not readily divisible into classes. The leaven of sincerity must permeate the entire mass. The most far-sighted and progressive business men have recognized that honesty and truthfulness are indispensable assets for the successful conduct of any business. The strongest force for the purification of advertising to-day is the growing determination on the part of advertising men themselves to put an end to the deception and fraud which have so long characterized some phases of this business.

The Danger of Infection From Ice.

The modern practice of using iced food and drinks is so universal in this country that it is important to determine to what degree ice may be

relied on as not carrying infection. When in the seventies and eighties of the last century it was shown that pathogenic bacteria might survive freezing, ice fell under suspicion as a possible medium for the transmission of disease; yet few epidemics have been ascribed to it, and the evidence concerning these has been regarded as inconclusive. H. S. Cumming in a recent article in the United States Public Health reports makes a study from the point of view of the source of ice, the physical and biologic changes accompanying or consequent on its formation, and the methods employed in its collection or manufacture and handling.

Ice is either natural or artificial. Until recently, in order to secure clean, transparent artificial ice, it was necessary to distill the water used, thus destroying all disease-germs present. With the newer methods employed, filtration is held to be sufficient. Cumming remarks that the fact, well known to chemists, that during crystallization nearly all extraneous substances are expelled from the crystal, was overlooked by sanitarians until recently. As Whipple says, "qualitatively the early bacteriologists were right; quantitatively they were wrong." In the formation of natural ice, most of the impurities are expelled into the waters of the pond or stream; and the same result is attained by the newer methods of artificial ice-making. By the "can" method, cans of water are immersed in the freezing mixture. As the freezing proceeds, the impurities are forced toward the center. In one of the newer methods, large cans are used, and the cakes of ice are cut into smaller ones, eliminating the dirty core. By another new "can" method, the impurities are expelled into about 6 inches of water kept liquid by agitation. In the "plate" method, the water is contained in large tanks, on one side of which are pipes containing the freezing mixture. The water freezes next the pipes in plates about 11 inches thick, and the impurities are expelled into the water beyond.

Some natural ice is undoubtedly derived from polluted rivers or ponds. Three great factors tend to purify ice from polluted waters: The first, as just mentioned, is crystalization. The second is temperature—the fact that freezing destroys a large percentage of bacteria. The third and most important is time. The longer the time intervening between the infection of water and its use (as water or as ice), the slighter the chance of the survival of the germs. On this score, natural ice, which is collected and stored for sveral months before shipment, has the advantage over artificial ice, which is usually marketed soon after it is made. Owing to these three factors—crystalization, temperature, time—clear, clean ice is of itself as free from danger as could be wished. Artificial ice made from pure water in clean, sanitary factories may be regarded as safe; so also may natural ice cut from reasonably pure deep ponds or lakes and stored under sanitary conditions. Artificial ice made from polluted water in dirty, insanitary factories are unsafe; natural ice cut from shallow polluted ponds or from grossly polluted rivers is also unsafe. Any dirty-appearing, cloudy ice may be infected as well as polluted; no such ice should be used in contact with food or drinks. Ice which is otherwise safe may become infected by improper handling—by being dragged across dirty streets or sidewalks or distributed by unclean hands. This is the great source of danger. Summing up the situation, The Journal of the American Medical Association says that we may practically eliminate danger by avoiding the handling of ice with dirty hands, by washing the ice with pure water, and by using only clear ice.

Low-Grade Medical Schools A Poor Investment.

The diplomas issued by thirty medical schools in the United States are practically worthless on account of the low standards of these schools,

which prevent their recognition by the state boards. These facts are shown in a report on medical schools in a recent issue of The Journal of the American Medical Association. In from fourteen to thirty-two states the diplomas issued by thirty medical schools are not recognized. In these states the graduates of these thirty schools are not admitted to the examinations for license to practice medicine. This information should receive wide publicity, particularly in the interests of prospective medical students. Before selecting a medical school the student should know whether the training furnished and the diploma given by that school will qualify him for examination and for a license to practise medicine in any state he may choose. The fact that recognition has been withdrawn or withheld from certain medical colleges, is not always given publicity by state boards and, of course, is not published in the announcements of the colleges affected. Some students, therefore, have not been aware of the conditions until they had matriculated, or even until they apply for a license to practice. Hundreds of students have entered low-grade medical colleges, have spent large sums of money and have devoted three or four years to study, or have been graduated before they learned that their diplomas were practically worthless. This is wrong and places a life-long handicap on these students. Information regarding the non-recognition of low-grade medical colleges by state boards should be in the hands of every prospective medical student when he chooses his college. This knowledge will enable him to avoid the serious mistake of making a bad start on his life's work. The intelligent student, thus informed, would certainly not waste his time and money in a low-grade institution when in the same time and with perhaps even less money he could obtain a training in a thoroughly well-conducted medical school which would also enable him to render better service to the people who will depend on him for medical attention or hygienic instruction.

Interpleural Pneumolysia.

Dr. Franz Torek of New York in the July number of Surgery, Gynecology, and Obstetrics, raises objection to the treatment of pneumothorax of lung tuberculosis advocated by Forlanini and Murphy, which has for its object the giving of the diseased organ more or less functional rest, and permitting the fibrous tissues to contract about the tuberculus foci. Dr. Torek holds that the pneumothorax treatment will not bring about the desired results under all circumstances, and would substitute in certain cases where the adhesions are so extensive that the pleural cavity is practically but not completely obliterated. He objects to the extensive removal of the ribs on the affected side from the 1st or 2nd to the 10th or 11th, according to Friedrich and others on the ground that most patients having such extensive disease of the lungs, are not in condition to bear so severe an operation and that as a matter of fact the death-rate in these cases is high.

The method of operation advocated by Dr. Torek is as follows:—

"Anesthesia is conducted by intratracheal insufflation or other methods of differential pressure to guard against the possible occurence of respiratory accidents. An incision of ample dimension about six inches, is made in the sixth or seventh intercostal space, at the posterolateral aspect of the chest, down to the pleura, and after all hemorrhage has been stopped the pleura is opened. The patient is now placed with the head low, so that if in the manipulation of the lung the contents of the cavity are expressed, they may run into the mouth and not into the opposite lung. The adhesions between the two layers of pleura are then separated. This is accomplished by introducing at first only the tip of the finger to separate the adhesions in the immediate vicinity of the incision, the ribs being

held apart by retractors. The separation then proceeds further and further until finally the whole hand is introduced into the chest in order to liberate the more distant parts of the lung. In the course of this procedure bands of adhesions may be encountered that are so dense as to require division with the aid of scissors. When the separation of adhesions has been completed, the lung will collapse as much as the degree of its infiltration will permit; it is allowed to remain in this state of collapse and is closed without drainage. The two ribs which had been separated apart are brought in apposition by pericostal sutures of silk or chromicized catgut, the muscles are sutured with chromicized catgut, and the skin with silkworm-gut.

Following this operation there is none of the pain that is often experienced in the ordinary pneumothorax treatment after the injection of nitrogen, a pain that is doubtless due to the fact that the injected gas causes sufficient pressure on the lung to stretch some of the adhesions. After the operation no tugging on the pleura can take place, although the collapse of the lung is extreme, and this circumstance explains the absence of the pain.

Nullification by Amendment.

In spite of the fact that legislation restricting the practice of medicine to those showing adequate training and qualifications can be justified only on the ground of public good, each year, in practically every state in which the legislature meets, the medical practice act of that state is subject to attack from some source. Thus each year it is necessary for those interested in the maintenance of high educational standards to resist the assaults made on the law. One who has watched the course of legislation throughout the country for a number of years, says The Journal of the American Medical Association, is led to wonder why a law clearly in the interest of the public must each year be defended from attack by those interested in breaking down its restrictions. In spite of the agitation against such laws under the pretext that the individual should be allowed "free choice of doctors," it is significant that the attacks on medical practice acts are always inspired and led by those who wish to treat the sick for compensation and not by those who wish the privilege of selecting some unqualified practitioner as an attendant. Another significant fact is that no matter how carefully drawn or how diligently guarded after its passage a medical practice law may be, it is eventually nullified, either partially or completely, by the passage of an amendment or the rendering of a judicial decision modifying the definitions or introducing such exemptions as will make it possible for untrained and unqualified persons to perform, under the authority of the law, the very acts which the law itself was intended to prohibit. This nullification process has occurred repeatedly in different states. No better example of it has recently been observed than the recent amendment of the Massachusetts medical practice act, which resulted in the adoption of the following amendment: "Nothing in this act shall be held to apply to registered pharmacists, registered dentists or registered optometrists, or to restrain the practice of clairvoyance, hypnotism or mind cure, or to apply to any person who administers to or treats the sick or the suffering by mental or spiritual means without the use of drugs or material remedies." Evidently the belief in Massachusetts in spirits, ghosts and similar superstitions has persisted ever since Cotton Mather's day. The legalization by the Massachusetts legislature of the fortune-telling clairvoyants who are being put out of business as swindlers by the police in many of our states is a sad commentary on legislative conditions in a state which was once regarded as

the intellectual leader of the nation. Another amendment to the bill defined the practice of medicine so as to restrict it very largely to those claiming to be scientifically educated and qualified physicians. That is, the Massachusetts law has gradually been modified by amendment from a restrictive measure into a definitive law, in which the illegal act consists, not in treating disease without proper qualifications and authority, but in claiming to be what one is not, namely, a legally qualified medical practitioner. Such a definitive law, as has been repeatedly pointed out, has its advantages. It must be clearly recognized by physicians and others interested, however, that a purely definitive law is not restrictive and never can be. The amendment of the Massachusetts act furnishes another interesting chapter in the history of our complicated, contradictory and generally ineffective methods of regulating the practice of medicine by law.

The Public and Low-Grade Medical Colleges.

The public in eighteen states is not adequately protected against untrained doctors. The boards of thirty-one states are making use of the legal power conferred on them to discriminate between medical colleges and to refuse recognition to those which are of low standard or are not properly equipped to furnish their students a satisfactory training in modern medicine. Of the thirty-one state boards seven will not license the graduate of any medical college unless he has completed at least two years of work in an approved liberal arts college before taking up the study of medicine. There remain eighteen states, in some of which the boards do not have legal authority to pass on the character or standing of the colleges whose graduates may be admitted to examination, while in other states the boards are apparently given ample powers, but are not using those powers. These states are Arizona, California, District of Columbia, Idaho, Illinois, Kansas, Maine, Massachusetts, Missouri, Montana, Nebraska, Nevada, North Carolina, Oregon, Tennessee, Utah, Washington and Wyoming. These facts are taken from a recent report in The Journal of the American Medical Association. Since the graduates of these low-grade medical colleges cannot secure licenses in thirty-one states they will flock to those in which they are still eligible. These eighteen states, therefore, are certain to be the dumping-ground for the output of these inferior colleges just so long as the practice acts permit, or so long as the state licensing boards do not take action against them. The people have the right to expect that the state—on which the national constitution places the responsibility—will grant them proper legislation, and that the licensing board—the only legal body having these matters in charge—will take such action as is necessary to protect them against the ill-trained product of low-grade medical colleges.

Wrongly Diagnosing Case As One of Pregnancy—Insufficient Allegations To Show Malpractice—What Not Disease.

(Merriam vs. Hamilton (Ore.), 130 Pac. R. 406).

The Supreme Court of Oregon reverses a judgment for malpractice rendered in favor of the plaintiff and remands the cause with directions to allow a nonsuit. The court says that the plaintiff, a married woman, averred in substance that about February 6 she employed the defendant as her physician to treat her for backache, and that he entered on such service, but did not use due care in treating her for the malady, in that he diagnosed her case as one of pregnancy, and that he contended for his diagnosis until November 8, while she was not pregnant, etc. In the consideration of the plaintiff's allegations it was of no importance whether the plaintiff was pregnant or not, for either condition is normal for a mar-

ried woman who has not passed her sexual climacteric, and neither one of them is a disease or a malady. Although the complaint said that the defendant failed to ascertain the plaintiff's true condition, yet no intimation was given about what that true condition was. To charge a defendant with a tort in a case of this kind, it should appear for one thing that the plaintiff's real condition was one of disease which by the exercise of the ordinary skill of his profession on the defendant should have discovered, for "they that are well have no need of a physician." In other words, if the plaintiff was in a condition of health, no cause of action would arise on the mere expression of opinion or diagnosis that she was in one or the other condition of pregnancy or nonpregnancy. In this the complaint was amenable to the objection that it failed to state a cause of action. True enough, the plaintiff said that she had a backache, but pain is not a disease; it is only the symptom of some disorder of the body which in turn may not amount to disease or trauma.—(Journal of the American Medical Association.)

Liability for Removal of Sesamoid Bone Without Authority.

(Rolater vs. Strain (Okla.), Pac. R. 96.)

The Supreme Court of Oklahoma affirms, on the appeal of defendant Rolater, a judgment for $1,000 damages for an alleged trespass to the person of the plaintiff Strain by removing a sesamoid bone without authority. The court says that the plaintiff stepped on a nail which penetrated the great toe of her right foot. Inflammation set in, and the wound not having healed, some sixty days after the injury, her employer caused the defendant to make an examination of the foot. The defendant advised that an operation was necessary to effect a cure, and that the operation should be made by making an incision in the foot or toe so as to drain the joint and remove any foreign matter that might be found therein. In performing the operation, a sesamoid bone was removed. The cause of action was the removal of that bone. It was not claimed that the operation was unskillfully performed, but that the defendant had agreed before the operation that he would not remove any bones from the foot, and that the removal of the sesamoid bone was without the authority or consent of the plaintiff and constituted a trespass to her person and technical assault and battery. The defendant answered, among other things, that, before reaching the joint so as to drain it he found it covered with a sesamoid bone which rendered it impossible to drain the joint without the removal of such bone, which was in an unusual place and its presence could not be ascertained by an examination.

In a civil action by a patient against a surgeon for assault and battery, it is not necessary to show that the surgeon intended, by the act complained of, to injure the patient. It is sufficient if it appears that the act was wrongful and unlawful. Consent of the patient, either express or implied, is necessary to authorize a surgeon to perform a surgical operation on the body of the patient. An operation without such consent is wrongful and unlawful, and renders the surgeon liable in damages. Consent, however, may be implied from circumstances. If the contract claimed was made between the patient and the surgeon, the former had the right to insist on a strict performance of it; the removal of the sesamoid bone by the surgeon was without the consent of the patient and was therefore unlawful and wrongful, and constituted a trespass on her person. The defendant had no authority to remove a sesamoid bone from the plaintiff's foot without her consent, either express or implied; she did not expressly consent, and whether or not her consent was implied from the circumstances was a question for the jury to determine under all the evidence.

Physician Not Liable for Hot-Water Bottle Injury in Hospital.

(Stewart et al, vs. Manasses (Pa.), 90 Atl. R. 574.)

The Supreme Court of Pennsylvania says that this action was against the family physician of a woman, by whose advice she went to the public hospital for a surgical operation. After the operation she was burned by a hot-water bottle that had been left by a hospital nurse in the bed in which she was placed. Recovery of damages was sought on the ground that the injury was caused by the negligence of the defendant, or that of the nurse, for whose action he was answerable. It was alleged that the defendant agreed to perform the operation, and to treat the patient with care and skill while under his charge, and to furnish her the services of a skillful nurse, and that he failed in the performance of his duty in this regard. The evidence showed that the defendant was a member of the associated staff of the hospital and had the privilege of sending patients there for treatment either by himself or by the regular hospital physicians and surgeons; that he agreed for a stipulated sum to perform the operation, but the hospital expenses were to be paid by the patient, to whom he gave a letter of introduction that secured her admission to a private room in the hospital; that she was prepared for the operation by hospital nurses under the direction of the directress of nurses and etherized by a physician employed by the hospital for that purpose; that she was operated on by the chief hospital surgeon assisted by the defendant, and was removed from the operating-room to the recovery room by hospital nurses and the physician who had etherized her; that the defendant followed them into the recovery room and stood near the foot of the bed when she was placed in it; that the duty of preparing the beds in the recovery room and placing the patients therein rested entirely with the directress and the hospital nurses, the surgeons having nothing to do with it, and that this was the general rule in hospitals. Under these circumstances there was no liability on the part of the defendant for the injury caused by the negligence of a hospital nurse, and a non-suit was properly entered.

Responsibility of Hospitals.

That hospitals are responsible for the conduct of the physicians and nurses employed is the effect of a judgment handed down by Mr. Justice Macdonald in Vancouver, in the case of Thompson vs. Columbia Coast Mission. Thompson secured a judgment against the Columbia Coast Mission and Dr Stuart Tidey, the superintendent, and the jury awarded him the sum of one thousand dollars. The patient was an old man in the employ of a local company, and had been paying a dollar a month to the Mission in return for medical treatment, should it be necessary. He entered the hospital suffering from a dislocated shoulder, and, possibly on account of his advanced age, the results of the treatment were not satisfactory. "Upon the justness of the verdict no comment can be made as we are not in possession of the facts. We desire merely to call attention to the principles which were laid down. The judge held that the plaintiff was in a different situation from that of patients in England, who might make a choice of the institution where they would be treated, as he must either apply for treatment to the Mission Hospital or forfeit any benefit from the moneys paid by him for that purpose The practice of monthly payments for hospital and medical attention was general throughout the province, and it was unreasonable to suppose that in the event of want of care in such medical attention the workmen could only seek redress from the physician, who might not be financially responsible, and concerning whose appointment or dismissal he had no voice."—The Canadian Medical Association Journal.

Honor For Dr. Flexner.

Dr. Simon Flexner, director of the Rockefeller Institute, has been notified by the French ambassador at Washington that the Cross of Chevalier of the Legion of Honor has been conferred upon him by President Poincare. This honor has been bestowed, it is stated, in recognition of the services rendered to medical science by Dr. Flexner through his own discoveries and his admirable administration of the institute. In the award special mention is made of the assistance given to France, at the time of the epidemic of cerebrospinal meningitis there, by the sending to the Pasteur Institute in Paris of a supply of the new anti-meningitis serum, which was successfully employed in combating the disease.

Appointment of Dr. Janeway.

It is announced that Dr. Theodore C. Janeway, Bard professor of the practice of medicine in Columbia University, has accepted the professorship of medicine in Johns Hopkins University, Baltimore, recently offered him, under the full time basis made possible by the gift to the University of $1,500,000 by the General Education Board. It is stated that Dr. Llewellys F. Barker who succeeded Sir William Osler in the chair of medicine, was unable to remain in the position under the new conditions, but will continue his service at the Johns Hopkins Hospital.

New Cancer Hospital.

It is announced that arrangements have been effected for the control by the Cornell University Medical College of the largest cancer hospital in this country. The buildings for this are those of the General Memorial Hospital, at 105th and 106th Streets and Central Park West, an institution which was originally intended for the treatment of cancer. A fund of over $1,000,000 has already been secured, and $500,000 of this is stated to have been contributed by Dr. James Douglas, head of Phelps, Dodge and Company, through whom also the hospital will receive a large supply of radium.

Nurses' Fees.

"Doctors are liable for pay of nurses,"—at least that is what Deputy Commissioner Blair says, according to the daily press, (May 10, 1914.)

"The business on the part of the medical men and hospitals of defrauding nurses is becoming a nuisance. There is no specific breach of the law where the patient is unable to pay, but the doctors have no right to call nurses on cases where they know they will never get any money without telling the nurses of the conditions. Doctors will hereafter be held liable."

A Munificent Hospital Gift.

It is announced that Mr. James Deering, of Cleveland, Ohio, has made a gift of $1,000,000 for the endowment of the Wesley Hospital of Chicago, with the provision that it shall be a teaching hospital under control of Northwestern University. This munificent gift is made in memory of the donor's father and sister.

BOOK REVIEWS

Progressive Medicine. Vol. 16. No. 2. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College, Philadelphia. Assisted by Leighton F. Appleman, M. D., Instructor in Therapeu-

tics, Jefferson Medical College, Philadelphia. Lea & Febiger, Philadelphia and New York. Price $6.00 per annum.

The first subject for review in this valuable publication is Hernia by Dr. Wm. B. Coley. Dr. Coley goes over this subject in a rather exhaustive manner and from the literature and his own personal experience of the different methods of operation, endeavors to determine their relative value from the per cent of recurrence. Dr. Coley does not look with favor on Ochsner's method of treating femoral hernia who disregards the ring and contents himself with ligating the sac high up. This method is employed mostly at the Mayo clinic. In 395 cases of femoral hernia observed by Bresset, 232 were operated without closure of the ring with 29 per cent recurrences; 186 operated with closure of the ring 8.6 per cent recurrences.

Dr. John C. A. Gerster reviews the Surgery of the Abdomen Exclusive of Hernia.

The value of Rontgenology in examination of the intestinal tract comes first. It is shown that in the opinion of English, American, and German authorities, Rontgen-ray examinations are not to be relied on without taking into account all the clinical facts. Dr. Gerster also shows that while transverse abdominal incisions are still in favor on the continent, there are certain serious objections to the method; for instance the inadequate reunion of the recti and the greater danger of hernia if infection should occur.

Another important subject reviewed is the control of oozing within the abdomen. For this purpose pieces of fat from beneath the margins of the abdominal wound or pieces of muscle are grafted over the oozing surface, a method in common use in the Mayo Clinic. A study of methods of preventing abdominal adhesions is presented. Some twenty-one sustances have been introduced into the abdomen experimentally for this purpose. The final conclusion is that the three rules laid down by Coffey can only be relied on.

1. Thorough Asepsis.
2. As little handling as possible.
3. Avoidance of all traumatism and exposure to the air, as far as can be.

Speaking of Pituitrin, Gerster says that it has not as yet found widespread acceptance.

An exhaustive review of the surgery of the stomach is given. Particular reference is made to the Polya-Reichal Wilms modification of the Billroth method in partial resection of the stomach. The proximal end of the stomach is not closed but a loop of the jejunum is stitched to the side of the stomach after the Finney method, the jejunum is opened and the opening in the end of the stomach attached by the ordinary gastro-jejunostomy method; the loop being passed through the meso-colon. To reduce the opening 3-5 as much of the stomach and 2-5 as much jejunum is included in the stitch. Dr. W. J. Mayo has done this operation in about 20 cases with very good results. A rather lengthy review of the diseases of the intestines follows the discussion of the stomach. Adami takes occasion to say that the word "auto-intoxication" ought to be banished from the vocabulary of all self respecting men. The questions relating to Jackson's membrane and Lane's kink, including the work of Eastman, are reviewed. In regard to the liver, one point is taken up in the review "Does a Billiary Peritonitis Exist Without Perforation of the Bile Passages?" So far the evidence seems to be in the affirmative. Concerning the Rontgen Ray in determining gall stones, Cole found 20 out of 500 cases examined for gastro-intestinal lesions.

Dr. John G. Clark exhaustively reviews recent literature on cancer of the uterus, particularly Radiotherapy, and admits that nothing new has been worked out. The same may be said of Rontgen therapy in myomas. In relation to myomas in general, that is blood and lymph supply, and the action of drugs on organotherapy, considerable has been written.

Dr. Clark goes over again the question of radical versus conservative ovarain surgery, and finds the same old divergence of opinion. There is a good deal of adverse opinion to resections of ovaries and as much against removing both ovaries, during the child-bearing period. It can only rarely happen that it is necessary to remove both ovaries except in beginning malignant diseases of the uterus.

Gonorrhea in women is largely a review of Norris' book. An interesting review of the female urinary system is given, and much useful information can be gained from it. A variety of miscellaneous gynecologic topics are presented.

Diseases of the Blood, Diatetic and Metabolic Diseases of the Thyroid Gland, Nutrition, and the Lymphatic System, by Dr. Alfred Stengel. This is so full and exhaustive that the reader may find in these 74 pages nearly all that has been said on these complex subjects in a condensed abstract. Gout, Diabetes, Ductless Glands, and allied subjects conclude Dr. Stengel's work in this volume.

The abstract of Ophthalmologic literature is made by Dr. Edward Jackson.

Report of the Committee on Inquiry into the Department of Health, Charities, and Allied Hospitals. Section Ten. Problems and Reorganization.

We have endeavored to abstract a series of reports by the Committee on Inquiry appointed by the Board of Estimates of New York City, for the purpose of bringing about better conditions in the great hospitals of New York City. These reports might well be taken seriously by many hospitals outside of New York. It is only a recognition of the duties which hospitals owe to the public, and apparently the only way to bring about a more efficient service is to lay the whole matter before the public.

The Committee says that; "It is probable that the conditions in Bellevue are no worse than in a large proportion of our good hospitals. If any of our high-class hospitals were examined in detail, many things would be found which should be corrected and which the attending physicians would readily admit should not have occurred. However, these facts set forth in connection with those in section three, have seemed to the Committee of such import as to warrant a recommendation for a rather radical recorganization of the medical service in Bellevue Hospital."

The Committee says further: "The primary object of Bellevue Hospital as well as other hospitals should be to properly and adequately care for the sick. Its form of organization, should all be directed toward accomplishing efficiently this primary purpose."

Again, the Committee says: "Prompted by the fact that the medical service in Bellevue Hospital is inadequate and that the opportunities for study offered by the large number of patients and the expensive equipment are not being adequately utilized, and the Committee has deemed it advisable to recommend a radical reorganization of the medical service."

Plan of Re-Organization.

Only two recommendations of the Committee have a definite bearing on hospitals in Iowa; therefore only these two are reproduced in this review:

1st Control to remain in a Board of Trustees to which shall be dele-

gated power to determine general matters and policies. Such Board to appoint a Superintendent for a prescribed period of years, who shall have full administrative control of the Hospital."

3rd. "Present Medical Board to be supplemented by an Advisory Committee constituted as follows: the Chiefs of the Medical Services, the Chiefs of the Surgical Services, the Pathologist, and the Superintendent; such Committee to have no power other than advisory."

Blood Pressure: Its Clinical Applications. By George W. Norris, A. B., M. D., Assistant Professor of Medicine in the University of Pennsylvania; Visiting Physician to the Pennsylvania Hospital; Assistant Visiting Physician to the Univesity Hospital; Fellow of the College of Physicians of Philadelphia. Octavo, 372 pages, with 98 engravings and 1 colored plate. Cloth, $3.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1914.

The importance of blood-pressure in diagnosis, prognosis and treatment is becoming more widely recognized every day, and with this recognition has come the creation of a literature devoted to this special field. The latest contribution to this literature is that of Dr. Norris. He has presented his subject in condensed and practical form, and as definitely as the present state of our knowledge permits. Both the experimental and clinical data which have been available have been included, for it is the combination of these two that the physician must rely upon when handling his cases. The author's method of discussing each part of the subject is such that his book is a well balanced presentation of the latest scientific information regarding blood-pressure and its clinical applications. It is probably the most complete and authoritative work in English on this new and extremely important topic. The illustrations are well chosen and help to an easy understanding of the text.

General Medicine. Practical Medicine Series. Vol. 1. 1914. by Drs. Frank Billings and J. H. Salisbury of Chicago. Price $1.50.

General Surgery. Practical Medicine Series. Vol. II. 1914. by Dr. J. B. Murphy of Chicago. Price $2.00.

Eye, Ear, Nose and Throat. Practical Medicine Series, Vol. III. 1914. by Drs. Casey A.Wood, Albert H. Andrews, and William L. Ballenger of Chicago. Price $1.50.

Gynecology. Practical Medicine Series, Vol. IV. 1914, by Drs E. C. Dudley and H. M. Stowe of Chicago. Price $1.35.

Pediatrics, Orthopedic Surgery. Practical Medicine Series, Vol. V. 1914, by Drs. Isaac Abt and John Ridlon of Chicago. Price $1.35.

General Medicine. Practical Medicine Series, Vol. VI. 1914, by Drs. Frank Billings and J. H. Salisbury of Chicago. Price $1.50.

The Series is published by The Year Book Publishers, 327 S La Salle St. Chicago, under the editorial charge of Dr. Chas. L. Mix. Ten volumes are issued yearly, the price being $10.00 or the books are sold separately if desired at the quoted price.

Each volume is a complete resume of the literature on the subject for the year previous to the year of issue.

It is here possible to quickly "catch up" on any subject as the authors—all of them well known—have sifted the literature and presented the salient points of advance.

Notes and comments by the authors are a valuable feature. Exceedingly handy books for quick reference.

A Manual of Diseases of the Nose and Throat. By Cornelius G. Coakley, M. D., Clinical Professor of Laryngology in the College of Physicians

and Surgeons, Columbia University, New York. New (5th) edition. 12mo, 615 pages, with 139 engravings and 7 colored plates. Cloth, $2,75 net. Lea & Febiger, Publishers, Philadelphia and New York, 1914.

This work has long been recognized as one of the most practical and useful manuals of Laryngology in the English language. It touches upon the pathology, simplifies and abbreviates the diagnosis, and emphasizes those methods of treatment which are most practical Its statements are brief and clear, and its illustrations convey valuable supplementary information. This book gives quickly and easily the practical working points indispensible in the every-day routine of the busy physician. Its teaching quality, as well as its simplicity, are among its attractions, for it is a favorite text for undergraduate students. With the publication of this new edition, the fifth, Coakley's Laryngology is again before the profession in revised form.

We have no hesitancy in recommending this book as one of the most convenient and practical books on this subject which it has been our pleasure to see.

Diseases of the Skin, Including the Acute Eruptive Fevers. By Frank Crozer Knowles, M. D., Instructor in Dermatology in the University of Pennsylvania; Clinical Professor of Dermatology, Women's Medical College of Pennsylvania; Fellow of the College of Physicians of Philadelphia, etc. Octavo, 546 pages, with 199 engravings and 14 plates. Cloth, $4.00, net. Lea & Febiger, Publishers, Philadelphia, and New York, 1914.

This book by Dr. Knowles is exceptionally well illustrated and is for this one feature rendered most valuable for speedy reference. The work is complete in that it takes up in addition to the usual skin diseases, every general disease which shows skin eruptions. Diagnosis and treatment are entered into in ample detail. A very readable and a very valuable book.

The Practical Medicine Series. Vol. I. Series of 1914. General Medicine. By Frank Billings, M. S., M. D. and J. H. Salisbury, A. M., M. D.

This first volume of the 1914 series presents a short section on Immunity and Abderhalden's Enzyme Diagnosis, followed by a very thorough review of Tuberculosis, with special reference to treatment by Tuberculin, new and old.

Other diseases, of the lungs, heart, blood-vessels, blood, and blood-making organs and ductless glands, and metabolic diseases, with a discussion of late methods of urinalysis, make up the balance of a volume, full of food for thought, not alone for the general practitioner for whom the work is primarily intended, but also for those engaged in special work. To the latter, other and later volumes may make a special appeal, but any advances in the field of general medicine are well worth the attention of the specialist.—H. R. R.

A Treatise on Diseases of the Nose, Throat and Ear. By William Lincoln Ballenger, M. D., Professor of Laryngolgy, Rhinology and Otology in the College of Physicians and Surgeons, Chicago. New (4th) edition, thoroughly revised. Octavo, 1080 pages, with 536 engravings, mostly original, and 33 plates. Cloth, $5.50 net. Lea & Febiger, Philadelphia and New York, 1914.

Four large editions in six years is a record of very unusual achievement. An examination of the contents of this work will disclose the reasons for its enviable popularity among students, practising physicians and specialists. Every line of the text and every one of the five hundred and thirty-six illustrations bear evidence to the enormous amount of work,

care, and expenditure bestowed upon this book by both author and publishers. In this respect it is almost unique in medical literature. In this new edition the important feature will be found in its chapters on the Labyrinth, the new matter on which amounts to over one hundred pages. Great labor has been bestowed in marshalling the facts and formulating them for teaching purposes. Thirteen original colored plates now illustrate the physiological and pathological manifestations of nystagmus. A careful study of these alone will suffice to convey a clear idea of the subject. Twelve drawings illustrate the Newmann and the Hinsberg labyrinth operations. Among other new matters may be mentioned the full description of Mosher's fronto-ethmoid operation, with five drawings, showing each step. Mosher's technic is a distinct advance in the surgery of the sinuses. Autogenous vaccines in the treatment of hay fever are given place, though this remedy has not yet fully proved its value. The section on Functional Tests of Hearing has been rewritten. Otosclerosis has been revised and brought fully to date. Haynes' operation on the cisterna magna is fully described, and five drawings illustrate the technic. Vaccine therapy has been revised, and the His Leukocyte-extract therapy is given in detail. It forms a distinct advance in the treatment of certain forms of infectious diseases, especially of the nasal sinuses and meninges. Meningitis has been largely rewritten, with much new material. The section on Abscess of the Brain has been revised by Dr. Howard Charles Ballenger. The use of salvarsan in the treatment of syphilis of the brain and auditory nerve is described with great fulness. It forms an important addition to this edition. Dr. George McBeam's theory of the causation of paracusis Willisii is given in full. In a word, every line of the book has been revised, all obsolete matter has been eliminated, and much new text has been incorporated, with many new illustrations and plates, all of which were drawn by the author. The volume in one hundred pages larger than the previous edition and there are about thirty more illustrations in the text as well as eleven new plates.

We take the pleasure in presenting the above facts in regard to Dr. Ballenger's monumental work. Having been a student under Dr. Ballenger having been shown many of the illustrations and chapters in the making we have awaited each edition with interest. Without doubt, this is the acme of books on nose, throat and ear and should be on the table of every physician who pretends to have a thorough knowledge of the special subject.

Practical Therapeutics, Including Materia Medica and Prescription Writing, with a Description of the Most Important New and Non-Official Remedies Passed Upon by the Council on Pharmacy and Chemistry of the American Medical Association. By Daniel M. Hoyt, M. D., Formerly Instructor in Therapeutics, University of Pennsylvania: Fellow of the College of Physicians, Assistant Physician to the Philadelphia General Hospital. Second Edition Revised and Rewritten. St. Louis. C. V. Mosby Company, 1914. Price $5.00.

This is a very convenient work on Therapeutics and is arranged in such a manner as to enable the physician to obtain the desired information as to the physiolagic action and the therapeutic value of a drug in the briefest time. The logical arrangement of its contents is much to be admired. A valuable feature of the book is the treatment of the poisonous effects of drugs and the arrangement of the toxicologic relations are such that in the haste attendant on such conditions, the missing information can be quickly secured.

A large number of non-official substances passed upon by the Council

of Pharmacy of the A. M. A. are included and adds to the value of the work.

A chapter on prescription writing and administration of medicines is included.

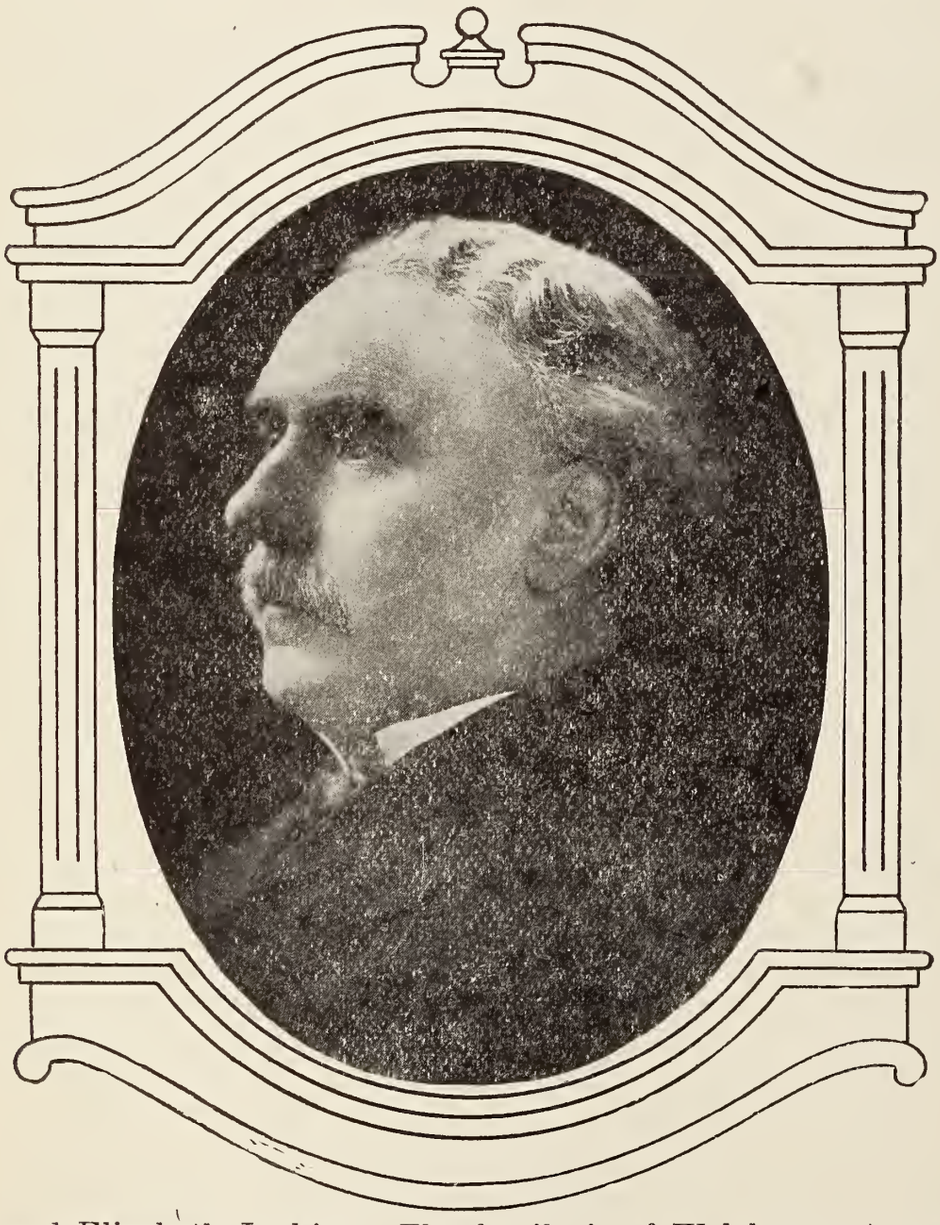
Lastly an excellent and extensive index adds materially to the value of the work.

DEATHS.

Dr. Geo. F. Jenkins of Keokuk died at St. Joseph's Hospital at 6:30 Friday evening, Sept. 4th, at the age of 72 years.

Dr. Jenkins has been for many years recognized as one of the leaders of the profession in Iowa. His death removes another of the landmarks of the early middle period of medical history in Iowa. He had been so closely identified with recent progress in professional affairs of the state, that although somewhat old in years he was young in spirit, and eager to place the profession of the state on the highest plane possible.

Dr. Jenkins was born in Clark County, Missouri, July 1842; son of



Robert and Elizabeth Jenkins. The family is of Welch ancestry and can be traced to David Jenkins who became a resident of Lancaster County, Pennsylvania, in the year of 1700. The family of the early Jenkins were connected with the Conestoga Iron Works. The mill and plant was in possession of the family for one hundred and thirty-seven years.

Dr. Geo. F. Jenkins began his education in the public schools of Clark County, Missouri; afterwards attended the high school at Alexandria, and

then entered the Commercial College at St. Louis. In 1865 he began the study of medicine in San Francisco, Cal. in what was known then as the Foland Medical College, later the Medical Department of the University of California. Returning to Missouri he matriculated in the Missouri Medical College at St. Louis, from which he graduated in the class of 1867. The honorary degree of master of arts was conferred upon him by Parsons College in 1884.

Dr. Jenkins located in Keokuk immediately after graduation, and continued in successful practice until the time of his death. Dr. Jenkins was active in medical society work and became a member of the Keokuk Medical Society in 1868, and for two terms was president of that organization. In 1869 he became a member of the Lee County Medical Society and a member of the State Medical Society. He was president of the State Society in 1891. In 1873 he became a member of the American Medical Association, and in 1903 he became one of the vice presidents.

Dr. Jenkins's earnest zeal for the advancement of professional interest, lead to his appointment frequently to committees of importance. He attended the last meeting of the Iowa State Medical Society at Sioux City, May 1914, at which time he took an actice part in the discussion of papers read before the Society. Dr. Jenkins was perhaps best known for his relation to medical education in Keokuk. The earliest medical college to be organized in Iowa was the College of Physicians and Surgeons, Keokuk, and in 1879 he was elected to fill the chair of diseases of children of this institution, which position he held until 1882 when he was made professor of the principles and practice of medicine and clinical medicine. This latter position he held until 1890 when he assisted in organizing what was known as the Keokuk Medical College. On the organization if this new medical school he was elected as president and to the chair of principles and practice of medicine including clinical medicine and physical diagnosis. In 1900 the College of Physicians and Surgeons and Keokuk Medical College, consolidated under the name of Keokuk Medical College, College of Physicians and Surgeons. He was elected president of the consolidated institution, a position which he continued to hold until 1907 when the Keokuk Medical College was consolidated with the Medical Department of Drake University. Dr. Jenkins was one of the leading promotors of St. Joseph's Hospital, Keokuk, and was Chief of the medical staff from the time of its organization until the time of his death.

Dr. Jenkins was married Dec. 29th, 1870 to Miss Charlotte Elizabeth Van Wagenen of Fulton, N. Y., daughter of Captain Van Wagenen, a representative of one of the old Holland families established along the Hudson in colonial days. Dr. and Mrs. Jenkins were the parents of five children, four daughters and one son; two of whom survive, Mrs. H. Boydon Blood, and Mrs. Karl Kiedaich. Dr. Jenkins occupied a place in the profession that will be difficult to fill.

For many years a group of physicians living along the eastern border of the state, wielded a very important influence in the medical profession. Dr. Jenkins appears to be the last of that group. The fuller and more complete development of the cities in the interior and western part of the state has changed in some measure the centers of medical influence. The old-time conditions will not probably return and perhaps it is not desirable that they should. The medical profession has taken a long step in advance, and the old-time ethical principles have given rise to new thoughts and new methods, and we are now perhaps more completely lost as to what the future has in store than at any time in the recent history of the profession.

Dr. John Calvin Fleming, a graduate of Jefferson Medical College, Philadelphia, 1871, a resident of Burlington, Ia., died at the bed side of a patient while making a professional call, Sept., 7, 1914, aged 65 years.

Dr. Wm. M. Mierley, a graduate of the Meico Chirurgical College of Philadelphia, died at Ottumwa, Ia., Sept., 13, 1914, aged 51.

Dr. W. W. Hawk, a graduate of the College of Physicians & Surgeons, Keokuk, 1880; a former resident of Colfax, Ia., for many years and potsmaster of that town from 1908 to 1913, died at the home of his daughter in Newton, Sept., 16, 1914, aged 70 years.

Dr. Francis M. Tate, Eclectic Medical College, Cincinnati, Ohio, 1857; Ecl. Med. Institute, Cincinnati, Ohio, 1874; a practitioner of Keokuk for many years and a member of the faculty of the Keokuk Medical College for several years, died at his home in Clarinda, Ia., Sept., 7, 1914, from apoplexy, aged 84.

Dr. Byron Irvin, Benedict University of Iowa 1907, a member of the A. M. A., the Tama Co., and Iowa State Medical Societies, who was struck by a Northwestern train while crossing a grade at Chelsea in his automobile, Aug., 27; died from his injuries in Mercy Hospital, Cedar Rapids, Aug:, 29, 1914. aged 31.

Dr. S. O. Davis, Manon Sims Medical College, 1895, a resident of Kent, Ia., died at a Creston Hospital, Aug., 30, 1914, from Brights disease, aged 50.

Dr. Frederick Edwin Welsh, Northwestern University Medical School, 1903; a Fellow of the A. M. A. and a member of the Boone County and Iowa State Medical Societies; who fell through an open trap door of his drug store, Sept., 3, 1914, sustaining a basilar fracture, died from his injuries Sept., 5, 1914, aged 39.

Dr. D. Langan, College of Physicians & Surgeons, Keokuk, 1863. One of the Pioneer physicians of Clinton, Iowa, died at his home, June 15th, 1914, from nephritis, aged 78.

Dr. F. H. VanDuzer, Rush Medical College, 1891, a resident of Cedar Rapids, for the past thirty years, died at his son's ranch near Arena, Colo., June 17th, 1914, aged 61.

Dr. Marcus E. Brown, College of Physicians & Surgeons, Keokuk, 1886, a veteran physician of Clinton, Iowa, died at his home on 6th Ave. at that town, June 16th, 1914, aged 76.

Dr. I. Z. Plunkett, Marion Sims College, of Medicine, St. Louis, 1896, a resident of Lewis, Iowa, for 18 years, died at his home in that place, August 14th, 1914, aged 38.

Dr. Edwin Darling, College of Physicians & Surgeons, Keokuk, 1886, a resident of Vail, Iowa, died at his home at that place, June 18th, 1914, aged 76.

Dr. F. J. Kinney, Northwestern University Medical School, 1912, died at his home in Olds, Iowa, June 10th, 1914, aged 26.

Dr. G. A. Heidel, St. Louis College of Physicians & Surgeons, 1897, a resident of Muscatine for 15 years, and a member of the Clinton County, and Iowa State Medical Societies, died at the home of his father-in-law, Muscatine, Iowa, August 10th, 1914, aged 42.

Dr. J. L. Sawyers, Northwestern University Medical School, 1878, a resident of Centerville, Iowa, a fellow of the American Medical Association, and of the American Academy of Ophthalmology and Laryngology, and a member of the Appanoose County, and Iowa State Medical Societies, died at Augustana Hospital, Chicago, August 10th, 1914, aged 58.

Dr. Carl Matthey, University of Zurich, Switzerland, 1880, a member of the Scott County and the Iowa and Illinois Central District, and the Iowa State Medical Societies, died at his home in Devenport, July 8, 1914, aged 62.

Rural Hygiene.

The Polk County Medical Society was favored at its meeting of September 11th by an address on the subject of Rural Hygiene by Dr. Thomas F. Keating of the United States Public Health Service.

It was largely in the manner of a report of what the United States Public Health Service is trying to accomplish by co-operating with local communities throughout the country in the effort to improve hygienic conditions. The address of Dr. Keating dwelt largely on a series of investigations that had been carried on in four counties in Indiana, and it was clearly to be seen that the problems involved there could easily be duplicated in our own state. He emphasized the fact that the real work of the future was not in the larger centers, and that the hope of preventive medicine was centered in an improvement of sanitary conditions in the smaller towns and rural communities.

It was brought out very clearly that the work of the modern health officer is truly preventive. That day has passed when the placarding of a house in which diphtheria has appeared, followed possibly by a "fumigation," and the recording a case in a book, is the beginning and end of a health officer's duty. He now investigates the throats of the other members of the family and o fthe immediate playmates, and will often without further cause visit the source of milk supply, and make careful inquiries there. The occurence of a second isolated case having the same milk supply is sufficient cause for examination by bacteriological means, of the throats of those persons coming into close contact with the milk and its sources.

The work of Dr. Keating in his recent investigation has been largely concerned with the epidemic outbreaks of typhoid fever, and he again and again referred to the unhygienic privy as the most prominent factor in explaining the spread of typhoid infection. In this governmental survey a definite plan has been followed of grading privies into different classes, the poorest grade being the one that was not properly covered, open to contact with flies and all manner of soil polution and unsanitary drainage, while the best grades were those in which the vault was cemented and covered, and the toilet adequately ventilated in every way. The report of the number of unsanitary privies in a community of rather high intelligence and advancement was distinctly startling, and made a strong impression as to the real danger of this factor in the spread of typhoid fever and other infections in which human and animal excrement is a carrier of the infectious agent.

The plan of the government officer and his campaign of investigation is to make a complete survey of the community by investigating the source of food supply, the disposition of drainage, and the toilet arrangement in and about the homes, school buildings, and other public meeting places, sources of public and private water supply, prevalence of flies and other factors that are known conveyors of the disease.

Definite standards are introduced for comparison with local conditions, and the effect of improvement along various lines, is graphically illustrated by means of private interviews through visits to the homes. and by public meetings, held usually in the school house of the district, until the community grasps the spirit of the movement, and shows its appreciation by a general improvement and higher standards of hygienic living.

The thoroughness with which this work is done and the necessary time that is required in going over one single county, makes it clear that it will be entirely impossible for the United States Public Health Service to be instrumental in instituting these investigations throughout the entire country, so the best that it can hope to do is to establish definite

standards, set an example for counties to follow, with the hope that this missionary work will be taken up by the state and municipal authorities everywhere in this country.

This brings up the question of a change in public health administration, and the plans now being instituted in New York, Maryland, Massachusetts, Ohio, and to a certain extent in Minnesota, of having full-time paid health officers, who are to be in control of certain districts in the state, is in keeping with this idea. Under this plan it will be possible to have definite sanitary supervision over all parts of the state, and thus be able to approximate to the high standard of the work being promulgated by the United States Public Health Service.

It is to be hoped that Iowa as a state will recognize the menace of unsanitary rural and local conditions, and respond as promptly to the needs of the hour as she usually does when the welfare of the people are at stake.

The Iowa State Board of Health is completing its plans of distributing typhoid vaccine throughout the state in the same was as diphtheria anti-toxin has been distributed heretofore.

The preventive power of typhoid vaccine has been so strikingly illustrated by the experience in its use in the United States Army and Navy Service, that it needs no further endorsement, but in bringing this to the attention of Dr. Keating he emphasized quite properly the greater importance of improving sanitary condition, as the typhoid patient in the community is the real menace for spreading the infection.

It would be distinctly unfortunate if too much reliance was placed upon the protective vaccination at the expense of improving sanitary conditions.

It thus seems evident that the solution of practically all problems in preventive medicine is to come through education of the people, and as the rural community recognized the dangers connected with the unsanitary privy, and the need of keeping the drinking water and food supply free from contamination with infectious material, better days will come and we will have a cleaner state to live in.

Walter L. Bierring.

The **Medical Society of the Missouri Valley** held the fall session of its 27th year at Colfax, Iowa, Sept. 17 and 18, meeting at Hotel Colfax.

The following program was presented:

Thursday, Sept. 17, 2:00 P. M.

Pernicious Anemia, Walter L. Bierring, Des Moines.

Discussed by Dr. L. W. Littig.

Report of Operated Pituitary Tumor, J. B. Potts, Omaha.

Discussed by Drs. M. J. Ford, A. F. Tyler; closed by Dr. Potts.

The Rational Treatment of Pulmonary Tuberculosis, John W. Flinn, Prescott, Ariz.

Discussed by Drs. H. Winnett Orr, Robert H. Babcock, E. S. Evans, O. H. Brown, W. L. Bierring, A. B. Somers, Granville N. Ryan, G. C. Giles, C. R. Van Voorhis; closed by Dr. Flinn.

The Prevention and Operative Relief of Deformity, John Prentiss Lord, Omaha.

Discussed by Drs. W. L. Bierring, H. Winnett Orr, Chas. R. Woodson, A. I. McKinnon, Wm. Berry, H. C. Ross; closed by Dr. Lord.

The Use of Bone Grafts in the Treatment of Fractures of Long Bones, Featuring New Instruments, Chas. G. Geiger, St. Joseph.

Discussed by Drs. John Prentiss, M. J. Ford, A. I. McKinnon, Austin McMichael; closed by Dr. Geiger.

Paper. (Illustrated by Stereopticon.) J. P. Sedgwick, Minneapolis.

8:00 P. M.

The address of welcome, which had been postponed because of the delay in arrival of many members on account of a severe rain storm, was delivered by Dr. Granville N. Ryan, chairman of the committee on Arrangements. The response was by Dr. L. W. Littig of Davenport.

President Flavel B. Tiffany of Kansas City read his annual address, which consisted in part of an extract from his forthcoming book of round-the-world travel.

The only scientific paper of the evening was by Dr. Robert H. Babcock, Chicago, The Various Forms og Streptococcus Endocarditis, With Specimens.

Discussion by Drs. W. L. Bierring, J. B. Potts, A. Sachs, O. H. Brown, Julius Weingert; closed by Dr. Babcock.

Dr. Babcock was unanimously elected an honorary member of the Society.

Friday, Sept. 18, 9:30 A. M.

The Relation Between Radium and Surgery, D. T. Quigley, North Platte.

Discussed by Drs. Lord, A. F. Tyler, Donald Macrae, C. E. Ruth; closed by Dr. Quigley.

Gastro-Intestinal Symptoms Resulting from Disease of Other Organs, J. C. Waterman, Burke, S. D.

Discussed by Drs. Donald Macrae, C. E. Ruth, Robert H. Babcock, O. H. Brown, E. C. Junger; closed by Dr. Waterman.

A Functional Testing of the Kedneys, and the Newer Phases of Nephritis, A. Sachs, Omaha.

Discussed by Drs. L. W. Littig, C. H. Newell, Donald Macrae, O. H. Brown, Clinton E. Harris, Julius Weingart, C. E. Ruth; closed by Dr. Sachs.

The Treatment of Disease and Injuries of the Sacro-Iliac Articulation, H. W. Orr, Lincoln.

Chronic Backache, L. W. Littig, Davenport.

Discussed by Chas. G. Geiger, John Prentiss Lord, E. C. Junger; closed by Dr. Littig.

Acute Perforating Ulcer of the Stomach, Symptoms and Treatment, A. I. McKinnon, Lincoln.

The X-Ray an Aid to Diagnosis in the Right Upper Quadrant of the Abdomen, A. F. Tyler, Omaha.

The Present Status of the Serological Diagnosis of Syphilis, Julius S. Weingert, Des Moines.

Diagnosis of Mediatinal Tumors, Campbell P. Howard, Iowa City.

Some Less Common Affections of the Foot, Arthur Steindler, Des Moines. (Illustrated by Stereopticon.)

Post-Operative Ileus, M. J. Ford, Omaha.

The following officers were elected: President, Granville N. Ryan, Des Moines; first vice-president, J. C. Waterman, Burke, S. D.; second vice- president, Dr. King, Blockton; treasurer, O. C. Gebhart, St. Joseph. Omaha was selected as the next meeting place.

Clinics at Des Moines Hospitals.

The party of about fifteen members arrived about nine o'clock. They were conveyed to the Iowa Lutheran Hospital, where they witnesed an operation for acute appendicitis by Drs. Lincoln and Conkling. Drs. Chas. Ryan and Franklin followed demonstrating a herniotomy under local anesthesia. Their second case, an abdominal section, was done under anociassociation following the method of Dr. Geo. W. Crile, of Cleveland.

The party was then conveyed to the Methodist Hospital and visited Dr. Steindler's orthopedic clinic, which proved to be most interesting. Dr.

Steindler presented a number of interesting cases with results most gratifying.

As the hour was then late the party was taken to the Des Moines Club where they were the guests of the newly elected president, Dr. Granville Ryan. Dr. Schooler was toastmaster, and extended a very cordial welcome to all visitors present, and complimented them upon their selection for president of the Missouri-Valley Medical Society.

Program of the last half of 1914, of the **Webster County Society**, Fort Dodge, meets every Tuesday night at eight-thirty o'clock at court house.

Officers, Pres. W. W. Bowen; J. D. Lowry, Vice-Pres.; G. B. Palmer, Sec.-Treas.

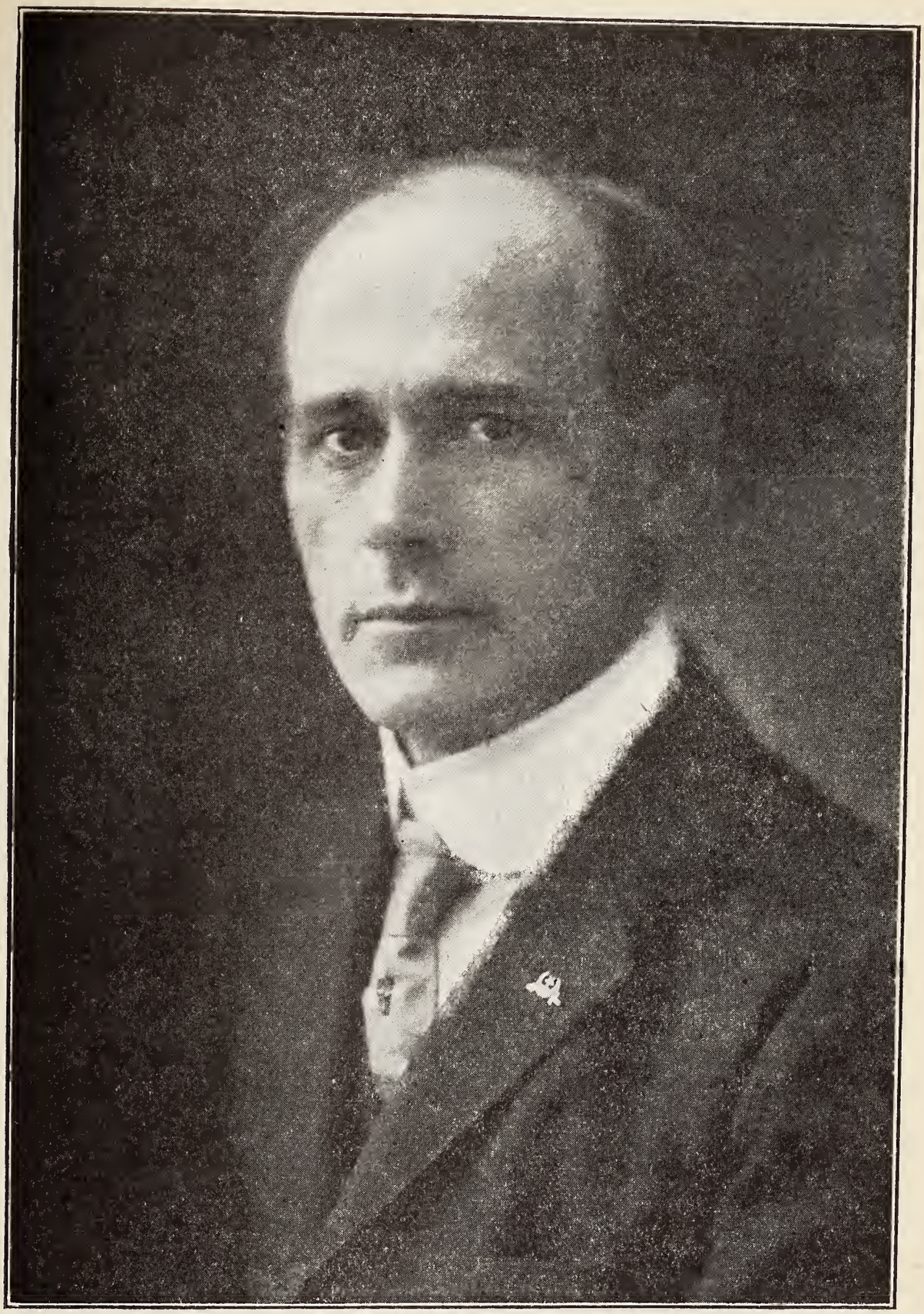
September 15,—Post Graduate Studies in Vienna and Berlin, A. H. McCreight. September 22,—A few Interesting Conditions Found in Right Hypochrondrium, A. E. Acher. September 29,—Salvarsan in Lues, E. D. Russell. October 6,—The Laboratory side of Diagnosis, T. H. Glenn. October 13,—Actinomycosis, C. H. Churchill. October 20,—Conservative Surgery of Female Genitalia, C. DeJong. October 27,—Treatment in Burns and Tramautic Injuries of Eye, W. F. Carver. November 3,—The Open Treatment of Fractures, by Suture, C. H. Mulroney. November 10,—Diagnosis and Treatment of Cranial Trauma, Robert Evans. November 17,—Tubercular Peritonitis, A. A. Schultz. November 24,—The Limitation of Tuberculosis, J. W. Kime. December 1,—The Value of the Roentgen Ray in Therapeutics, C. J. Saunders. December 8,—Reparative Processes in Bone, W. W. Bowen. December 15,—Compensation in Physiological and Pathological Processes, J. F. Studebaker. January 5,—Running Ears, S. W. Martin. January 12,—Shoulder Dislocations, J. D. Lowry.

The **Botna Valley Association** held its annual meeting at Atlantic, on August 28th. Program: The Effects on the Urinary Tract of Disease of the Genital Organs, Dr. A. C. Stokes, Omaha. Pericarditis, Dr. James Maynard, Adair. Colles' Fracture, Dr. C. L. Campbell, Atlantic, Tetanus with report of a case, Dr. W. S. Greenleaf, Massena. Treatment of Typhoid Fever, Dr. M. F. Stultz, Wiota. Recent methods of the Diagnosis and Treatment of Corneal Ulcers, Dr. James M. Patton, Omaha. Open Treatment of a Fractured Femur, Dr. C. C. Deitz, Tabor. Contagious Diseases and our Quarantine Laws, Dr. M. L. Turner, Des Moines. Eye Symptoms of Syphilis, Dr. F. W. Dean, Council Bluffs, Paper, Dr. I. F. Crosby, Stuart.

Marshall, Franklin, and Hardin County Societies held a joint meeting the afternoon and evening of Friday, July 24th, at Marshalltown. Program: Some Recent Advances in Surgical Procedure, Dr. Chas. J. Rowan, Iowa City. Eclampsia, Dr. F. S. Smith, Nevada, Iowa. Hernia, Dr. J. A. W. Burgess, Iowa Falls. Every-day Diagnosis, Dr. W. K. Long, Hampton.

Page, Freemont, Montgomery, Taylor, and Decatur Counties held a special joint meeting at the Clarinda State Hospital, Thursday August 13th, the program consisting of an interesting Psychiatrical Clinic, by Dr. Witte, and other members of the State Hospital Staff.

Dallas Guthrie County Society, for July 16th, had the following program: Treatment of Compound Fractures of the Leg, Dr. W. S. Conkling, Des Moines. General Discussion of Treatment of Fractures.



Granville N. Ryan, M. D.

Granville N. Ryan was born in Parmleysville, Kentucky, May 23, 1870. Moved to Colfax, Iowa, in 1880, where he received his early education, after graduating from High school, took two years literary course at Cornell College. In 1892 entered Rush Medical College, where he graduated in 1895. On account of the illness of his father it was necessary to work his way through literary school as well as medical school. After serving on the board of health in Chicago for six months, located at Des Moines, where he enjoys an enviable practice. He was a member of the faculty of Drake Medical School until this department was moved to Iowa

City. He is a member of the attending staffs of the Methodist, Mercy and Swedish Lutheran Hospitals.

For the past fifteen years Dr. Ryan has been in attendance at the annual meetings of the American Medical Association held in the various parts of the country. He has been an active worker in his county society, and enjoys the distinction of being its president now. He has also been active in the Iowa State Medical Association, of which he is now serving his third term as chairman of the Board of Trustees. In 1913 was a delegate from the Iowa State Medical Association to the International Congress which convened in London. He was married to Miss Miriam Pickens, Louisville, Kentucky, June 10, 1903. Dr. and Mrs. Ryan have one son, Granville Chilton Ryan, born June, 1906.

His genial southern hospitality is always extended to the members of the medical profession during their sojourn in Des Moines.

CORRESPONDENCE.

To the Editor:—We come to ask a favor from you to-day. The panslavistic party in Russia, the representative of the darkness and enemy of all progress, a state whose own subjects suffer the most, has taken the party of the murderers of Serajewo and has turned all Europe in a battle field. Against the will of the working classes, the French government delivered to the Russians first their wealth and now also their blood,—A small but mighty party in England succeeded notwithstanding the protest of the best men, to join this country, so far the stronghold of freedom and scientific progress, to the dark conspiracy of our fiends; it was the envy and the hate against our prosperous development, which succeded in breaking ties of a secular friendship. This universal empire, not having been ashamed to send the yellow race on our heels, has cut all the cables and communications, so as to prevent the cultured globe to know soon enough the shameful and dishonest doings; all the neutral countries are inunudated by false and lying "Havas" and "Reuter" dispatches, to turn from us their sympathy, so valuable to us in this fight, amalgamating all the different parties and all the classes in this struggle for the life of the fatherland.

But we must be victors and will be victors, we are fighting for freedom and culture of Europe and a better and fairer time of the human race.

It is therefore that we are sending to you newspapers and telegrams, telling the truth of the state in the batlefields and camps. Please help us to spread out the right state of things. You will help us and yourself.

Yours very faithfully,

Sitz: Baden-Baden. Der Vorstand.

A. Royster.

Burlington, Iowa, Sept. 21, 1914.

Editor Journal:—

I wish to report the following case:—Mrs. S. Age 29. Married 8 years. Mother of one child a year old.

Past history negative.

During the summer her health was below the average, a slight vaginal discharge with some burning on unrination.

On Aug. 23, 1914 she was taken with sharp cramps in lower abdomen, which kept up almost constantly for a week. They subsided somewhat, but two or three times a day, a sharp stabbing pain, especially in the right side of pelvis, would strike her lasting for several minutes. She became anemic. Appetite poor, bowels constipated. Had been in bed most of the time for a week before I saw her.

On Sept. 16th, 1914, I examined her at the Mercy Hospital. The

pelvis organs were tender to touch and a boggy mass could be made out in the cul-de-sac of Douglas

On Sept. 17th I operated, Drs. Thornber and Garner assisting. On opening the abdomen a quantity of free blood escaped. The mass behind the womb was brought up and proved to be the remains of a gestation in the left tube, which was ruptured. The membrane clots and tube were removed.

Bringing up the right adnexa showed an ovary about four times the natural size, and from it membranes and a clot were protruding. By compressing the ovary and coaxing the membranes with gauze they were removed and her ovary at once contracted to the natural size, so it was not removed.

The patient is apparently recovering.

The case is, so far as I know, a unique one. A double extra uterine pregnancy, one tubal, the other ovarian.

C. H. MAGEE, M. D.

NEWS & NOTES.

Dr. B. H. Criley who has practiced medicine at Dallas Center continuously since 1871, plans to retire from practice soon and will move to California.

Dr. Nellie S. Noble of Des Moines, is the new president of the Magazine Chautauqua Circle of Des Moines.

Dr. Chapin representing the A. M. A. was in Conference with the State Board of Health officials studying health conditions in Iowa, Sept. 17th.

Dedicatory services for the new addition to Mercy Hospital, Des Moines, were held Oct., 8, 1914, being conducted by Rt. Rev. Austin Dowling, Bishop of the Des Moines Catholic Diocese.

The German Lutheran Hospital Association will build a $50,000.00 Hospital at Hampton.

Dr. V. C. Gethman of Eldora was recently elected chairman of the Hardin County Democratic Central Committee.

The School Board of the city of Des Moines has decided to have an instructor of public hygiene and has elected Dr. P. B. Glue to the position. Dr. Glue will be expected to supervise the visiting nurses work, inspect the sanitation of the school buildings and have general oversight of the physically and mentally defective.

The Physicians of Ft. Dodge have established clinical laboratories and placed a trained laboratory man in charge.

The Travel Study Club of American Physicians which made a successful tour of Europe last year has completed plans for its 1915 tour to the meeting of the A. M. A. in San Francisco, Honululu, Japan, the Philippines and China with optional return via Siberia and Europe, war permitting or via Canada. If you want to go communicate with the Travel Study Club.

Up to and including Sept., 26, 1914, the Public Health Service reports in New Orleans 28 cases of human plague and 136 cases of vodent plague.

The United States Public Health Service reports up to and including to August 29th, that at New Orleans there had been twenty-two cases of human plague and seventy-four cases of Rodent plague.

The New Scott County Hospital, at third street and telegraph road, Davenport, Iowa, opened for public inspection, July 4th and 5th, 1914.

Dr. Geo. A. Smith was recently re-elected chairman of the Clinton County Republican Central Committee.

F. W. SPRAGUE, President. DR. E. E. DORR, Medical Director.
O. H. DAVISON, Vice President. J. A. McKINNEY, Treasurer.
T. H. KNOTTS, Secretary.

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ADDRESS IN MEDICINE

REMARKS OF SOME ORDINARY HEADACHES

HUGH T. PATRICK, M. D., Chicago.

I wish first to express my appreciation of the honor which your President has conferred upon me in asking me to come out and talk to my friends of the Iowa State Society, because I know I have some friends in the Society, and I hope others of whom I do not know. But by that same token, you know, I must put the burden of this responsibility on Dr. Dean, so that if my remarks are not a sufficiently potent hypnotic, the blame rests with him and not with me.

Before talking about headaches I wish to make two remarks. The first is that I hope you won't consider that I am trying to cover the subject of headache; and the second is that I do hope you won't consider that I am talking at all **ex cathedra.** I don't suspect remotely that I know very much about headaches, and consequently I have requested, if in accordance with the President's pleasure and your desire, that this subject be discussed, because I know there are many men here who can contribute quite as much to this subject, if not more than I can; and the subject of headaches, although an ordinary trouble, is one which is still subject to considerable enlightenment.

I am going to talk simply about four ordinary, everyday headaches which all of us see, whether we be specialist or general practitioner, surgeon or internist, or whatever the line of our practice may be. The first of these headaches has been called indurative headache and rheumatic headache; the Germans call it. Just how frequent this thing is I don't know. Some days or weeks I think

it is pretty frequent, because I see a good many of them; and then I may go a considerable while without seeing any. I am sure that in the past many of them have slipped through my consciousness and have escaped without being recognized, and that may still be the case. On the other hand. I think that sometimes I have made a diagnosis of rheumatic headache when it was something else.

Now, a few of the characteristics of this rheumatic or indurative headache, which at any rate is not rare; and the first is that generally it is occipital or sub-occipital or both, though it may be limited to the temporal region on one side or both sides, or it may be temporal pain with this occipital or sub-occipital pain. And the next thing, it is a real pain. It is not, like one of the other headaches, a sort of distress or pressure or something else, but it is a real pain; it hurts. As long as it is on it hurts, but it is not a regularly continuous, steady hurt. While it is on it is rather steady; it is a constant ache; it is a real pain; but it varies. Some days it is better and some days it is worse. Part of the day it will be better and part worse. It is very apt to change with the weather. One of the other characteristic things about it is that it is accompanied by tenderness to pressure (which does not pertain to many headaches, by the way, and this tenderness is where the pain is, or near by. So that if there be a temporal headache of this character, there is tenderness to deep pressure in the temporal region; that is, there is tenderness of the muscle or flesh or connective tissue elements in that neighborhood. As the pain is principally occipital or sub-occipital, the tenderness is in that region. We find tenderness to pressure in the muscles, especially about the transverse process of the fourth cervical vertebra. These are not uniform, but by feeling all over the area, and in the first place picking up the muscles, for instance, the trapezius, between the fingers, that sometimes is tender, occasionally the sternomastoid muscles by rather deep pressure along the back of the neck, the occipital and sub-occipital region, and down the side of the neck, we are pretty sure to find here or there a few or many abnormally tender places.

In the next place, there is nearly always pain upon the movement of the head and neck—some movement; not always this one and not always that one. It all depends upon where the location of the thing is, and that varies enormously.

Those are the principal characteristics of the pain itself. It is rather frequently accompanied, as one might reasonably expect, with rheumatic pains or symptoms elsewhere; and sometimes that helps out more or less in the diagnosis, because in all rheumatic troubles there is very apt to be some focus of infection somewhere. So in this headache or neckache—the patients nearly always call it headache— the neck part has to be investigated. There is very apt to be a focus of infection somewhere, which in my experience is apt to be above the larynx. It is in the tonsils; there is infection

in the nasal tract; three is sinus infection of some sort, or there is pyorrhea. It may occur from trouble in the gall-bladder, prostatic trouble, and so on.

The treatment rather attends to itself, if one recognizes it as a rheumatic—that is, an infectious—headache. The first thing would be to remove the cause; it can't be removed until it is found. Then, symptomatically, the best remedy is massage, which should be manual massage; not one of these electrical vibrators, which, after all, is better than nothing; but when a good manual massage can be obtained it relieves this headache more thoroughly than anything else, and the prognosis is invariably good. In the meantime the thing recovers rather slowly, as do most chronic or sub-acute rheumatic troubles; and while the massage is getting in its work on these tissues, removing what cannot always be felt, in spite of the assertion of our Scandinavian friends to the contrary; that is, an American can't always feel these thickenings and nodes and nodules and so on. Still the massage does accomplish the cure in some way. In the meantime the best relief is heat—a hot water bag or hot compresses; and if one can catch one of these headaches very young, and just in the beginning, of course aspirin or full doses of salicylate have a very beneficial effect.

The next thing I am going to talk about is the headache of sinus disease. This is particularly one of the headaches which I would like to hear discussed by our rhinological friends, because they ought to know a lot more about it than I do.

The pain of sinus disease is undoubtedly frequent; there isn't any question about that. I doubt if there is a practitioner in this audience who has been in practice really an appreciable time who has not seen the sinus headache cases. They are not rare at all, and they are very frequently overlooked, even by the rhinologists themselves—at any rate, the pseudos! The pain of sinus disease may be acute or chronic. The acute cases are more frequently recognized, perhaps, than the chronic cases; at any rate, it is the chronic cases that come to me. The pain of sinus disease is a steady pain. I emphasize that because there are some other pains that are not steady. It may throb with the pulse, as any pain may which is due to inflammation. Practically that means a pressure pain. This pain is steady, but it is not continuous as a rule; that is, it is a pain which will last a few hours, a few days, a few weeks, even months; then, without any very apparent cause, it is apt to disappear, and it will disappear for hours or days or weeks or months, and then it comes again. I presume sometimes it does not come again, if the sinus trouble cures itself, which perhaps it does sometimes. But at any rate it is a trouble in the head, a steady pain, a real hurt, which fluctuates; it is better and worse, disappears and comes back. This intermittence may be perfectly regular, and when it is of this character it is extremely significant. There are not so many pains which

return at the same hour every day and continue for about the same length of time and disappear spontaneously, but the sinus pain is one of them. Not that all sinus headaches have this character, but frequently it is the case, and when it has this daily recurrence it is apt to be a morning pain. It is very peculiar. So far as I know, nobody has really an adequate explanation for that; it is something to be investigated. This patient, after a good or fair night's sleep, gets up in the morning feeling first-rate. He has not much more than had his breakfast until that pain comes on, and there it is, and it is troublesome or intense often; and then about noon it gradually disappears, and the thing is gone; in the afternoon he is very comfortable. He goes to bed and sleeps, and tomorrow the same thing is repeated. If this trouble is more acute, that pain is more apt to come in the afternoon. In the morning he is all right, but early in hte afternoon this pain comes on. The patient does not know what to do about it, but about the time he is driven to desperation the pain disappears. He goes to bed and sleeps, gets up feeling all right, and just about the same time the next afternoon it comes again. I have known this pain to be called hysterical; it is far from it. This pain, although variable in intensity, is a real hurt, and sometimes is exceedingly severe. In the acute cases it has been called neuralgic. It is as different from neuralgia as typhoid is from a fracture of the femur.

The peculiar thing about the location of this pain is that it is not necessarily over the sinus involvement. That is one of the misleading things. For instance, in the antrum case we expect to have the pain in the face. Very well, there may be no pain in the face, but a frontal pain over the eye, which misleads one entirely. In the sphenoid cases the pain is very apt to be occipital, on the top of the head, or it may be parietal. In the ethmoid cases the pain is apt to be at the root of the nose, or it may be on the top of the head. And in the frontal sinus there may be no pain over the frontal sinus, but up in the top of the head or in the parietal region. So that the location of the pain, while at times of help, is really not of very great assistance.

Next in importance to this irregular location of the pain is the fact that nearly always there is tenderness to percussion, sometimes to pressure; and there is tenderness to two kinds of percussion. A light, smart tap over the head is one thing that locates a localized tenderness. If it is a sphenoid, that tenderness may be in the temporal region, in the parietal, or it may be occasionally in the frontal region or right in the middle line of the root of the nose. On the other hand, that sort of percussion may elicit no tenderness or pain. Then there is the big, heavy percussion with the fist, which shakes the whole head, and apparently causes sufficient perturbation to elicit the pain when the trouble of the sinus is very deep-seated. Both of those are of use.

This sinus headache is very apt to be worse with a cold in the head, which is perfectly explainable, as the pain is essentially a pressure pain and with the connection of the coryza the parts are subjected to pressure, and consequently more pain is produced. Also the pain is worse on stooping or jolting.

Now I come to two characteristics or aids in diagnosis of this sinus headache, which for some mysterious reason has been neglected by the rhinologists and the men who have made particular study of these sinus diseases. I had to find this out for myself. The first is a little fever. It is a perfectly astonishing thing, but in a great big thick book on sinus disease there isn't a word about temperature on these cases, and what in the world would anybody expect more reasonable? If there be a little bit of tuberculosis some place, we think about variations in temperature. If there is a question of some infection, what is the first thing that anyobdy thinks about? Taking the temperature regularly to see whether there is any fever. And in these cases, even those that are very chronic and have existed for months and years, we find little elevations of temperature, especially when the pain is on. In these morning cases we get a morning elevation of temperature, which is apt to disappear in the afternoon, and which we know is rather the reverse in ordinary infection cases. The other thing which goes with it is a slight leukocytosis. One little thing in addition: in these sinus cases ordinarily (the old cases) there is no history of discharge. You ask a patient if he has discharged any pus from the nose, and almost invariably he answers no. Of course those profusely discharging cases probably never come to me at all, but the cases I see almost invariably give no history of discharging pus. One reason is that some patients get it back through the throat and spit it out or swallow it, and don't really know they have a discharge. Another reason is that many of these old sinus cases are really non-suppurative. From my standpoint it is altogether an academic question whether they are so called hyperplastic cases from the beginning, or whether they begin as suppurative. But the fact of the matter is that in a good many of these old chronic casse which cause these annoying headaches the condition is that the sinus is an accumulation of polypoid or gelatinous or slimy stuff, more or less like old, broken-down, granulation tissue, and it has to be scooped out with a curette or spoon; it is not a localized abscess at all. Not infrequently there is a good deal of watery discharge and no pus at all.

I will just stop a minute to say in connection with the fact that this pain is a steady pain when it is on, that it has a negative characteristic, which is that this pain is never aggravated nor started by washing the face, brushing the teeth, by eating, talking and so on; and I say that because those are the characteristics of real neuralgia, with which this thing is frequently confused; and the two very striking characteristics of a real neuralgia—only two I men-

tion now, are, first, that the pain is always short; it is generally only momentary; it is a sudden jab or pain in the face, or it is an extremely severe paroxysm which lasts ordinarily the fraction of a minute. When a patient with tri-facial neuralgia says he has pain for fifteen minutes or half an hour, he doesn't. If he has pain for an hour or two hours, it is the rapid succession of these extreme jaroxysms or short jabs; they come so often that the patient doesn't appreciate the period of repose. But the pain of neuralgia is essentially short-lived. I have seen one case in a total of 225 in which I thought a pain did last for fifteen minutes; the next longest was five minutes; and I have seen only one in which it lasted that long. It was a perfectly excruciating pain, and the patients did all sorts of things according to their nature and bringing-up, from simply puffing out the lips to swearing like troopers or yelling or screaming. But that doesn't last over ten, fitfeen, twenty or thirty seconds; then comes a pause and the pain is gone. That never occurs in the pain of sinus disease, and the pain of the real tri-facial neuralgia is practically always started by these slight peripheral movements—talking, eating, washing the face, brushing the teeth. That is the real neuralgia, and all these other things are not neuraligia, and not to be treated as such.

There are a few more little characteristics about this sinus pain which the rhinologist will bring out. One of them, especially in the antrum cases, is empyemia with very bad odor. There is sometimes pressure on the septum in connection with the sinus disease which contributes to the pain, and in some of those cases an application of cocaine and adrenalin to the tissues of the nose will relieve that headache to a very marked degree all at once. Recently my friend Dr. Gleason of St. Louis, and his associate, Dr. Stoddard, have been doing some very interesting work on injection of the spheno-palatine ganglion, trouble in the nose, hyperesthetic areas, and so on. They are relieved at once by anesthetizing the area. The whole subject really needs a good deal of investigation.

Another thing is that these cases are often relieved by steaming the nasal passages, because it relieves the congestion and the pain accordingly. Really the diagnosis must depend upon examination by a competent rhinologist—not a pseudo, please. And let me add that frequently the diagnosis cannot be made even with suction and shrinking up the parts and trans-illumination, until the middle turbinate is removed, so that all the cavities in connection with the nose have been explored; and those are the cases that have been the most aggravating. One was a preacher who came from out west, and we made a diagnosis of sinus disease headache. I sent him to one of the best rhinologists in Chicago, who sent him back with the statement that there was no sinus disease there. I sent him back with the statement that he must take a long rest, which of course he couldn't do, and in a year or two he came back and said the pain

was just the same. And by the way, this pain is often increased by intellectual labor or loss of sleep, by excess of ingested alcohol, and all that sort of thing. It is often confused with the neurasthenic headache. I went over this gentleman again, and I was forced to the same conclusion. I sent him to another rhinological friend, who said he was not sure; he really didn't think he could say without taking off the middle turbinate. I said, "For heaven's sake take it off." He did so, scooped out about a teaspoonful of stuff, and the man was instantly relieved, and for a number of years I know he wrote regularly to this rhinological friend to report how happy and well he was. That is only an instance, but they are not so very rare. Just within a couple of weeks I saw a young fellow who had been treated by electricity for a more or less constant pain in the parietal region for eight months. He was nervous, unreasonable and cranky about this pain. He had formulated all sorts of fantastic theories about himself, as ignorant people will. All this was taken as evidence of neurotic disposition, which he may have had; but when we came to test him by these characteristicsc of his head pain I said, "This is certainly a sinus," and he was relieved without much trouble by attending to his sinus. When I came to look into his nose I could see there was something that was radically wrong; I didn't attempt to go further.

These cases, on the whole, if properly treated, are exceedingly satisfactory . It is very gratifying to be able to relieve one of these headaches which has lasted for months or years and has been treated for all sorts of things, especially eye strain—glasses and glesses and still glasses, and muscle exercises and all that, when the trouble has been in the sinus.

Now, if you don't mind, we will leave that headache and go to its exact opposite, which sometimes acts very much like it; if we took the description of the patient it would be very convincing; and that is the neurasthenic headache. There are certainly a few of them here before me. The first characteristic of a neurasthenic headache is that it is not a headache at all. I don't mean to say that the neurasthenic individual can't have a pain in the head; he can. He can have an enlarged prostate, or break his leg; but the headache of neurasthenia is not a pain, and the patient himself will tell you so if he is properly questioned. He complains of a headache—more than that, he complains bitterely about it; but on direct questioning as to whether it hurts and what kind of a thing it is, especially if you ask what kind of a sensation it is, you will find out from him that it is a feeling of thickness or pressure on the top or in the sides, or like a tight band around the head; or on the contrary, it is a feeling of emptiness,—of pressure from the inside instead of from the outside; it is a feeling of contriction, or as if the top of his head would lift off; but it is not a pain. Now, just as soon as you can get that patient to confess that it is not a pain, he

will hurriedly add, "But I would rather have any pain." That is very true; it is an intense distress; it is a bad, nasty, cussed thing to have; but it is not a hurt, and therefore it differs from the other two headaches, and from the headache which I am going to talk about presently.

Now then, we ought to have a medical technic, as we have a surgical technic. Our surgical friends write whole chapters about the form of a needle, the constitution of a suture, whether the thing should be held in the right hand and twisted to the left, or vice-versa; but when the medical man, who doesn't know a needle forceps from an obstetrical forceps, talks about medical technic, he says: "Oh well, of course that is all right; I have been in the practice ten years; I know all about that." Now, there is such a thing as medical technic, and one of the points in this medical technic is a conception of what may be at work in the patient, and then a tactful method of extracting this important factor, which is perhaps quite as delicate as putting on the high tractor forceps at the superior end of the pelvis. In neurasthenic headache, this thing which is not a pain is so horribly distressing that the patients frequently come and demand an operation. They would be glad to be trephined—to have anything done in the way of an operation that can lift this thing out, because this pain in the head is indissolubly connected with an apprehension or a fear—at least an uncertainty. The patient does not always know it, but he is afraid. This thing in the head means to him— very consciously sometimes, but more frequently in a sort of sub-conscious, ill-determined way—insanity or partial insanity, loss of efficiency. To him it may mean apoplexy or epilepsy; it may be that he is suddenly going to fly off the handle or do something that he is ashamed of, or create a spectacle in a crowd, and one of the methods of diagnosis is to find this out and make it plain to the patient if that is the case.

Another thing about this neurasthenic headache is that the patient says it is constant; that he has had it every day for twenty years. A pain in the head every day for twenty years is never anything but a neurasthenic headache; it is not pain. A patient will say, "I have had it all the time for six months." That is based on no organic disease whatever. A patient will say, "I wake up with it and go to bed with it, eat with it and sleep with it." Still that pain, with a little tactful questioning, is divertible; that is, in times of excitement or intense application, when the patient is very much interested or amused or pleased, he has no headache; but as soon as he comes to himself he is subject to it. And by that same token a neurasthenic headache never keeps a patient awake at night, because it is not a pain; and if it is not a pain, the pain can't keep him awake. But neurasthenics don't sleep well, that is very true. Perhaps you will ask, "Does the pain ever keep you awake?" and the reply will be, "Oh yes, I haven't slept a night in six months." They

don't sleep well because they are nervous; they are thinking about all kinds of things. But the neurasthenic pain never keeps a patient awake, and if the patient can't sleep nights from severe pain, that is not a neurasthenic pain. A neurasthenic pain is a circle, a point, a square, a parallellogram, a ring—all of these things which are really geometric pains. That is always a functional pain, because none of our nerve structures are built on geometric lines.

The treatment of the neurasthenic headache is the treatment of neurasthenia; it involves many factors, requires close attention and lots of cares. But in the meantime the neurasthenic's courage must be kept up, and one of the easiest ways to encourage a man who feels mean is to make him feel better. Often the patients take a short cut through alcohol. It is a very poor sort of a prop, but bromide is a legitimate prop. In giving bromide to neurasthenics I observe all of the care with which I would give them opium. I never do give it, as a matter of fact, but I never let the patient know what it is. I never give a neurasthenic a prescription for bromide; I supply it in some form myself, or I see that he gets it and doesn't know what it is, and that none of the family, especially not the husband, if the patient is a wife, or vice-versa. Very frequently the patient will say, "What is this for?" "To make you better." "What is it?" "Never mind; that is my stuff, and you take it." And that is all the satisfaction that any neurasthenic ought to have—that or the same kind of talk about his medicine. He never ought to know about its etiological action or what particular thing it is to relieve, only the positive assurance that it will make him better; and it will. I have never seen a neurasthenic headache that was not relieved by bromide, provided the patient did not know. They have all had bromide—not less than 15 grains three times a day, and generally 20 or 25 grains, and very frequently 30 grains three or four times a day for a limited period. So we say, "You come back in two days and your head will be better." "Well, I don't know; I have had doctors tell me that before, and I wasn't."Well, you come back, and if you don't tell me you are better I won't charge you a cent." They are always better. They are not cured; they are not even on the way to recovery, except this first little step that they are better. He begins to get an idea maybe you can do something for him after all, and then you really get to work to cure him.

The last headache is my particular pet, and that is migraine. Migraine is certainly the stepchild of medicine; it is always around, and it is always neglected. I will venture to say there are not two blocks in any good-sized town in this state that a man can walk and not pass a case of migraine. You can't walk a hundred and fifty yards without passing a case. There are certainly at least half a dozen cases right here in this room now, and yet, upon my word, there seem to me to be more fallacies connected with migraine than almost any other disease known. More doctors have migraine than

any other disease, except hypertrophy of the ego and atrophy of the pocket-book.

I have to go over this pretty fast, and I am just going into the ordinary, every-day characteristics which we see in nearly every patient. The first thing is that somewhere from 90 to 95 per cent of migraine cases are directly inherited. Nearly always one or the other parent has the same disease—generally the mother; if not the mother, then the grandparents or brothers or sisters. My own statistics correspond to those of everybody else in every land. Of course in this country it is not so easy to trace back accurately, but when one can, the first element is direct heredity; and naturally there is a precocious inception which begins early in life. Since I arrived in this town I have seen a lady who said she had had headache all her life. It doesn't always begin until after twenty; I never knew it to begin after thirty. In the cases that are not so very bad it never lasts over night. There is nearly always a history. I used to get those awful headaches. I would lie down at night, and the next morning I would be all right; maybe a little tired or sore, but the real pain in the head gone. Then it gradually becomes worse, more intense, more frequent; the attacks last longer as age comes on; until in the menopause in women and a little older in men it reaches its maximum.

Now, the pain of migraine is no distress or feeling of pressure or emptiness or anything like that; it is a real pain; it hurts. It hurts exceedingly; ordinarily it is disabling. There are a lot of us, undoubtedly, who can remember when mother was done up and things didn't go right, and she had to lie down in a dark room; because, however industrious, when mother had her headache there was nothing for it.

In the next place, this pain is not a paroxysmal pain. It may drop; it may be a little worse this five minutes and let up the next five minutes. But while this headache is on it is a constant, non-remitting hurt; it is a pain. It is irregularly periodical; it disappears, and then is gone, and whatever the patient may attribute it to, it goes; that is all there is to it. It doesn't come again until it reappears, and that may be a day, three days, a month, three months. These periods vary in length, except occasionally there is a woman who has this only at her unwell time. That, after all, is very exceptional. Women frequently tell me that they have these pains only when they are unwell; otherwise they don't have them. But the menstrual headaches are not so frequent and not so severe. In fact, nearly all those menstrual migraine subjects do have pain between the period of menstruation.

This headache is designated so variously that often even physicians are misled. One case has no nausea and no vomiting; another has nausea but no vomiting; the next one vomits to beat the band. They are called sick headaches. Very well, if they have

stomach symptoms we call it a sick headache, but the stomach doesn't have one thing to do with it. Other headaches are called nervous headaches; other headaches are called neuralgic headaches. "Did your mother have anything like this?" "Oh yes, mother had headaches; she was awfully sick at her stomach; but I am not." The element of nausea and vomiting hasn't a thing to do with the diagnosis; ordinarily it is frontal or temporal or bilateral. A young woman I know always has it on one side. Occasionally this pain is only perceived by the patient in the eyes or back of the eyes. The eyes have nothing to do with it. This pain is sometimes so excruciating that I have known surgeons to advise an operation for the relief of it. Often the patient can tell when she is going to have one. Some of them are most interesting. Then there is the kind called ophthalmic, in which there are always eye symptoms. They always vary: blind spot or black spot, or mist before the eyes, like lightning flashing; and there are cases accompanied by aphasia. They are exceedingly interesting and not so very explainable. But they are all variations of the same thing, and it is migraine.

This pain—what in the deuce is it? Well, you may search me; I don't know what it is. I could talk from now until tomorrow about various hypotheses: the reflex theory; the stomach theory, which is as old as Galen; the sympathetic system explanation, which is very ingenious and very interesting; and now it has come up again with the old cloud thrown off and enveloped in vagotonia. The explanation may lie in vagotonia as a matter of fact; we don't know. Then there is that beautiful uric acid theory which exploded like fireworks and doesn't exist except where some of the sticks have come down and stuck in the medical profession. There are still men that attribute this to uric acid; it is rotten stuff. There has recently been a theory which emanated from Vienna that this was due to some circulatory change in the choroid which caused a distention of the ventricles with closure of the foremen of Monro, and consequent pressure until the distention caused some kind of a paralysis and the foramen opened up again and the pressure was relieved. If you want to believe it, all right. Then there is another theory that it is caused by the brain being too large for the skull, or the skull too small for the brain. Then there is the eye strain theory. I don't say that eye strain may not aggravate migraine; it may. All we do know is that it is a peculiar entity—a symptom complex; that it, so far as we know, is a thing of itself. The latest is that it is connected with the internal glandular secretions, and there is something to support that. As far as we can go is to say that it is a neurosis; it is a nervous disease of some kind. I am one who believes that it in some way belongs in the same class with idiopathic epilepsy. We do not know what epilepsy or migraine are, and consequently we cannot treat it rationally by removing the cause. We cannot really treat it in a prophylactic sense, because

we don't know what to take away so that this patient may not have the headaches; except that when a child has migraine parents, it is natural to cause that child to lead a hygienic life, to live an outdoor life, to make him as robust and tough and resistant as can be. In treating a well-developed case it naturally falls to us first to remove all the causes which may lower the tone; to attend to a woman who has a leucorrhea or who has infected tubes. If a man has a bad nose, with pressure on the septum, bad eyes and eye strain, bad habits regarding eating or drinking or tobacco using, of course they are to be atended to. Then does that cure migraine? I am sorry to say it very seldom does. It helps some. Then what are we going to do about it? We are just going to do the best we can, and I think ordinarily that is to tell the patient the truth. If it is a lady, I will say, "I am afraid you are going to have these headaches more or less frequently until about the time of the menopause, and the probability is that then you will lose them." I say to a man, "You behave yourself and go along and live properly and rationally and reasonably, and be a little better to yourself in a physical and mental way than if you hadn't this thing, and I hope that when you are about sixty the thing will taper off, and you will finally get rid of it." That is awfully cold comfort, but it is better to start on a fair basis. What I do is to put the patient on **cannabis indica**, and the first thing is to get a good preparation, and the next thing is to give enough. One of the things about **cannabis indica** which is not always understood or known is the susceptibility of various people to the effect of the drug as I know of no other of such raving effects. We know that one man can drink a quart of whiskey and carry it off, and his friend around the corner can't take two cocktails without showing it. Out of the same bottle I have had physiological effects from four drops of the fluid extract in a man six feet tall, a robust chap; while at the same time a little woman who weighed about ninety pounds was taking 60 drops. If you say right off the handle you give anywhere up to 60 or 80 drops of cannabis indica. Hasheesh is not cannabis indica. The only way to do is to give a small dose and gradually increase it until the patient feels the physiologic or intoxicant effects. Ordinarily that comes with a good fluid extract. You can get the hemp and make the fluid extract of it yourself. The stuff doesn't mix with anything that I ever saw. The patient drops it into a capsule and takes it after a meal. When she has a dose which makes her a little bit oozy in her head she has had too much; then you diminish the dose about twenty per cent and carry it on almost indefinitely. But instead of acquiring a tolerance, as patients do in most so-called narcotics, in this case the patients frequently develop a susceptibility, so that after a little she can't take 30 drops, and you have to drop down to 15. I had a patient who took 30 drops for a while, and now she can't take more than four or five drops with comfort.

If that doesn't work (and God and I know it doesn't always). we try the French method, which is to give bromide, just as you would in epilepsy, three times a day, in such amount as can be tolerated without inducing brominism. Lately my colleague in Chicago, discovered that by combining one of the ordinary remedies for migraine with thyroidin he got an excellent result. It sounds as if in some cases they were really very much more efficient than any other treatment, and that leads one to feel as if these glands of internal secretion might have something to do with the nature of precipitation of the attacks of migraine.

I am afraid I have taken up all of the time and havn't allowed any time for discussion, but I am greatly obliged to you for your kind attention.

ANAPHYLAXIS, AND ITS RELATION TO GENERAL MEDICINE*

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If we inject a susceptible animal with an antigenic substance, such as diphtheria toxin there is established in the animal a condition of tolerance for this toxin; and this tolerance is reenforced by a second injection of the same substance. But inject an animal, a guinea-pig for instance, with 0.01 c.c. horse-serum, and after a period of ten to twelve days or longer reinject the same substance and the animal develops severe and even fatal symptoms which we call "anaphylactic shock". It might seem that we have induced conditions radically different, but the contradiction is only apparent. The study of anaphylaxis which has been so actively pursued in recent years, has given us newer and clearer conceptions of immunity and other phenomena of infectious disease.

In the literature of a century ago are described observations of anaphylaxis, though not under this name nor conceived in the same way as today. For instance, it was observed during Jenner's time that many persons even though previously vaccinated became ill with an eruption resembling smallpox.

In 1892, von Behring found an increased susceptibility in animals, to diphtheria and tetanus toxins, even in those animals whose blood was richly charged with antitoxin. He called this condition "hypersusceptibility". Some years later Richet discovered an increased susceptibility rather than immunity in animals on reinjection of muscle tissue. To describe this condition which resulted contrary to his expectations he used the word "anaphylaxis", meaning without protection. Von Pirquet, following his extensive studies, proposed the term "allergy" meaning "altered reactivity" to express his conceptions of the altered reaction in serum and other

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diseases. The term "anaphylaxis" though it has come into general use is inappropriate, as Vaughan and Wheeler were the first to indicate that the condition of sensitation is essential to certain forms of immunity. Vaughan, therefore, advanced the term "protein sensitation" as more suitable to describe the reaction. Hence the terms "hypersensitiveness", "anaphylaxis", "allergy", and "protein sensitation" are used as synonyms.

Biedl and Kraus define anaphylaxis as follows: "By anaphylaxis we mean that state of specific hypersensitiveness induced in animals by protein injections and in which symptoms of poisoning follow subsequent injections of the same protein in doses which would have no effect upon untreated animals."

When a sensitized guinea-pig receives a reinjection of the same protein, after a proper interval of time certain characteristic and quite invariable symptoms develop, usually within five or ten minutes or as late as forty minutes. The reinjection may give rise to explosive symptoms, death resulting in a few moments from asphyxia due to spasm of the bronchi. If death is not immediate there is a marked fall in temperature, whereas in the milder reactions fever is produced. In case slower development of symptoms is desired, the reinjections are given subcutaneously or intraperitoneally, and here the typical reaction may be studied. There is the first stage of peripheral irritation, marked excitement and intense itching; the second stage is characterized by partial paralysis, inco-ordination of movement, and difficult breathing; and with the third or convulsive stage the animal usually dies.

In man the injection of therapeutic sera not only has an antitoxic influence but often causes typical symptoms of its own, often within a few minutes, usually within a few hours. The stage of peripheral irritation is characterized by the sudden appearance of a rash, usually urticarial or erythematous in type, which may spread rapidly over the entire surface of the body. The lips and tongue seem swollen; the individual becomes alarmed and complains of difficult breathing. In extreme cases there is retching, occasionally vomiting, and collapse. The second stage, that of great muscular weakness, continues for a variable time. Instances of sudden death have occured.

The anaphylactic reaction is obtained by various protein substances, such as blood-serum, egg-white, milk, and bacterial cellular substances. All true proteins sensitize, either of animal, vegetable, or bacterial origin. These substances which induce the anaphylactic state are known as "sensitizers" or "anaphylactogens". They are not "antigens" in the true sense of the word because they do not give rise to the formation of antibodies. (Vaughan).

The interval of time between the first injection and that time when a reinjection of the same protein develops symptoms of anaphylaxis is known as the incubation period. As a rule it covers a period of ten to twelve days and is quite constant.

The first injection of the foreign protein, though apparently without effect on the animal, induces exceedingly important changes. The anaphylactic state now exists and may continue for months or years and even throughout life. It has been found that guinea-pig sensitized to horse-serum may remain in this condition for two yeras. The continuance of the sensitized state after treatment with diphtheria antitoxin has been found to be as long as seven years. (von Pirquet).

By reinjection we mean the one made after the anaphylactic state has been established. It is essential that the protein substance be introduced parenterally i. e. either subcutaneously, intraperitoneally, intravenously or intracranially. Moreover the substance reinjected must be the same proteid that induced the condition of sensitization. For example, a guinea-pig sensitized to egg-white will react only to reinjection of egg-white. This specificity is well-marked in the case of bacteria. The anaphylactic reaction, therefore, is specific and in this respect is analogous to the laws of specific action in antitoxic immunity.

Of interest and importance is the fact that by injections of blood or serum of animals or persons already sensitized, the anaphylactic state can be transferred to a normal animal. We call this "passive anaphylaxis" and is specific for the protein with which the donor is sensitized, requires no incubation period, and may be transferred from mother to her off-spring.

The anaphylactic reaction is readily established in guinea-pigs, dogs, rabbits, sheep, horses, etc. Of the animals used guinea-pigs give the most striking results, because they are easily sensitized and the symptoms develop promptly and violently.

The leading hypothesis among the attempts to explain protein sensitation, or anaphylaxis, is that of Vaughan advanced by him in 1905. He gives us a sharp, clean cut conception, based on experimental evidence, of important phases concerned in bacterial immunity and infectious disease. A brief summary of the fundamental elements of his history, is as follows: The parenteral introduction of a foreign proteid develops in the body cells of the animal a new function, that of elaborating a proteolytic ferment specific for the proteid introduced. This specific ferment remains in the cells of the sensitized animal as a zymogen. Reinjection of the same proteid into the sensitized animal activates the proteolytic zymogen, and the body cells pour out the specific proteolytic ferment which will digest and destroy the particular foreign proteid introduced.

As Vaughan conceives all proteids to be composed of a poisonous and non-poisonous groups, this splitting-up of the proteid molecule sets free the poisonous group, and these toxic substances cause the symptom-complex of anaphylactic shock.

He transfers this splitting-up process of proteids that takes place in the animal body to the laboratory, and there he obtains "in

vitro" the same cleavage products by splitting-up bacterial, animal or vegetable proteids with chemicals. Thus all proteids without exception yield a poisonous and non-poisonous groups, and they are the same whether obtained "in vitro" or split-up in the animal body.

The poisonous group is the same in all proteids. The poison obtained from egg-white is the same as the poison obtained by splitting-up the typhoid bacillus, and kills animals in the same doses, with the same symptoms, and with the same lesions. One proteid differs from all others in its non-poisonous group. The specificity of protein sensitation and hence the establishment of specific immunity is dependent on the non-poisonous fraction of the proteid molecule.

And now let us make practical application of these principles and study the course of an infection. The development of an infectious disease is a process of protein sensitation. Bacteria are particulate, specific proteins. If a person is infected with the typhoid bacillus he does not immediately show symptoms of this disease. There is an incubation period of about ten days in typhoid fever. During this period the bacilli are rapidly growing in numbers and are converting the body proteins into bacterial proteins. The period of incubation comes to an end and the stage of the active disease begins when the cells of the person's body become sensitized, elaborate a specific proteolytic ferment and with this begin to split-up the foreign protein, which is the typhoid bacillus. The poisonous-group of the bacterial protein is liberated, and it is the effect of this poison that develops the symptom-complex of typhoid fever. Death may ensue from too-rapid splitting-up of the bacterial protein and the consequent liberation of a fatal dose of the poison, or it may be caused by some lesion induced by the split-products such as perforation, hemorrhage, or exhaustion. In case the individual recovers he is as a rule immune to the typhoid bacillus because his body-cells have been trained to pour out and make immediate use of the specific proteolytic ferment which destroys the typhoid protein before growth and multiplication takes place.

In the course of infectious and other diseases we observe various manifestation of the nature of protein sensitation or anaphylaxis.

The incubation period: It requires as a rule a period of ten or twelve days before the active symptoms of some infectious disease become manifest. Strikingly similar is the fact that in serum disease the incubation period covers a period of eight to twelve days. It requires the same interval of time to sensitize a guinea-pig after an injection of egg-white or with other protein substances.

Fever is the result of parenteral digestion of proteins. It may be detached or dead tissue from the animal's own body as after burns, or introduced artificially as in serum disease. In case of an infection it is a living bacterial protein. In the incubation period of an infectious disease as in typhoid, when the individual's body serves as a huge culture flask containing countless numbers of liv-

ing bacilli, fever and other symptoms are not present. Only as the typhoid cellular protein is split-up by the specific ferment and liberation of the protein poison, is there a production of fever.

Vaughan has shown that fever of any type could be induced experimentally by injecting animals with proteins of diverse origin. Thus by repeated subcutaneous injections of dilutions of egg-white in a rabbit a type of fever was induced that could not be distinguished from the temperature curve of a typical case of typhoid fever. In addition there were present the usual concomitants of continued fever as emaciation, loss of appetite, increased nitrogen elimination and decreased urinary secretion.

There are observed interesting cutaneous phenomena that are unquestionably anaphylactic. Some of the more important are; the eruptions of the acute infectious disease as smallpox, measles, etc.; reactions like the tuberculin test, the gonococcus reaction of Irons, and Noguchi's leutin reaction; and the urticarias and eczemas that may result from the absorption of unchanged proteins through the mucosa of the alimentary tract.

The eruptions in smallpox, varioloid and vaccinia, as von Pirquet has shown, are analogous to the skin lesions of serum disease. Varioloid or modified smallpox, as von Pirquet illustrates is due to the reinfection of an individual who has been previously sensitized by the disease itself, or by vaccination. The skin therefore, is one the tissues in which there is a predilection for deposition of certain foreign proteins, where they are split-up and given rise to characteristic symptoms.

To quote Vaughan; "We are compelled to change our ideas concerning the causation of the lesions of the infectious diseases. Formerly we believed the structural changes to be due wholly to the living, feeding, and growing micro-organism. For instance we were sure the intestinal ulcerations of typhoid fever are caused by the living bacilli. Now we know that these lesions follow the intravenous injections of dead proteins".

The symptoms of one infectious disease differ from those of another largely according to the organ or tissues in which the virus accumulates and its poisons are liberated. Thus the pneumococcus accumulates in the lungs, the smallpox virus in the skin, and the typhoid bacillus in the spleen and mesenteric glands. The symptoms of acute miliary tuberculosis and in typhoid fever are often strikingly similar and it is only by bacteriological methods, a suggestive history or the finding of an early tubercular focus that a differential diagnosis is reached. It is likewise impossible to determine the specific bacterial cause of a meningitis or a cholecystitis from the symptoms alone.

The pathogenicity of a bacterium is dependent upon its ability to grow and multiply in the animal body. This really marks the vital distinction between pathogenic and non-pathogenic bacteria.

For instance the bacillus prodigiosus is non-pathogenic to man for the reason that it can not grow and multiply in the human body. But inject the dead cellular substance of this organism into an animal and it will kill as readily as that of the most virulent microorganism. Recently it has been shown that when such non-pathogenic micro-organisms as sarcinea lutea or bacillus prodigiosus are suspended in from 2 to 5 per cent salt solution and injected into the peritoneal cavity of a guinea-pig, the normal lytic ferment of the animal is inhibited and the micro-organism multiplies, and the animal dies.

The development of immunity is the usual and natural termination of many acute infectious diseases. The mechanism of bacterial or lytic immunity differs from that of antitoxic immunity. Antitoxic immunity has a very limited range and depends on the neutralization of the toxin by the specific antitoxin. There are but few micro-organisms that secrete a soluble toxin such as the diphtheria bacillus, and the tetanus bacillus.

Protein sensitation and bacterial immunity, conditions apparently radically different, are in reality identical. Protein sensitation consists in developing in the animal body a specific proteolytic ferment which digests the same foreign protein on reinjection. In the case of an infection the foreign protein is a specific living micro-organism; and the specific ferment present in the body after recovery will destroy this particular pathogenic bacterium should they again gain entrance into the body, as occurs in natural infections. The organisms, therefore, are killed before they can grow and multiply and thus furnish toxic doses of the poison. We call this immunity, and is called bacterial immunity because the action in this instance is directed against the bacteria themselves rather than against their secretory products.

In vaccination we have establishment of immunity similar to that induced by an attack of the disease. A vaccine is a protein sensitizer and is the same protein that causes the infection. It must be so modified that it will not cause an infection and so little altered that it will educate the body cells to pour out the specific ferment which will cause prompt destruction of the infecting agent on exposure. Thus typhoid bacilli are killed by heat, and the virus of small pox is modified by passage through the cow.

The employment of vaccines in the treatment of disease deserves most careful consideration. Whether used for the induction of immunity or for its therapeutic effect the action of the vaccine is the same and involves the same principle. In either case they are protein sensitizers. When it is realized that with each injection of a vaccine a most powerful poison is introduced, the harm and danger that may result from their careless and indiscriminate use becomes at once apparent. It is not at all surprising that the employment of present-day "shot-gun" vaccines is occasionally attended with disastrous results. In the treatment of local infections, in which the

area of sensitation is limited and circumscribed, vaccines may be used provided such agents are known to be effective and harmless. By increasing the area of sensitization there is increased the production of the specific ferment which destroys the infecting agent. On the other hand, in most systemic infections the use of vaccines is irrational and may cause much harm.

It was observed long ago that a tuberculous animal behaves differently from the non-tuberculous on receiving injections of the various preparations of the tuberculin protein. In the use of tuberculin every phase of its action or its failure to respond is explainable from the view point of protein sensitation or anaphylaxis. The ophthalmic, cutaneous, subcutaneous, and intravenous tests with tuberculin are all evidences of the sensitation of the body of the tuberculous individual to tuberculin. When tuberculin is injected into a normal individual there is no response because the ferment which causes proteolysis of tuberculin is not present; but inject the same amount of tuberculin into the tuberculous individual, already sensitized by the disease, the specific ferment is present and attacks the tuberculin liberating the toxic split-product which gives rise to the symptom-complex known as the tuberculin reaction.

In cases of advanced tuberculosis there is no response to the tuberculin test, and here we have the condition known as anti-anaphylaxis. This means that the anaphylactic ferment is partially exhausted by the large amount of tuberculo-proteins supplied in cases of so extensive infection, or due to inhibition of the fermentative process brought about by the excess of products resulting from the digestion of the tuberculo-protein.

From this point of view it is obvious how unscientific it is to treat advanced cases of tuberculosis with tuberculin. Tuberculosis, as a rule begins as a strictly local infection. In this stage improvement may follow the proper use of tuberculo-proteins with the object of enlarging the area of sensitation and consequently develop more of the ferment to split-up and destroy the tubercle bacilli.

Extensive dissemination, and existence of the disease century after century, is slowly immunizing the white race to tuberculosis. The medical world is confronted with no greater problem than that of discovering some means by which tuberculosis may be eradicated. Possible solution lies in the hope of securing immunity to tuberculosis by means of vaccination. As yet, in spite of incessant attempts to modify the tubercle bacillus, no vaccine that is uniformly effective or one free from poisonous content has been found. Tuberculin is an excellent diagnostic agent because its relatively simple structure may favor its prompt cleavage when injected into an animal already sensitized by the disease. Tuberculin is not a sensitizer and therefor it is questionable if it has any therapeutic effect unless it establishes a tolerance to the tuberculo-poison. Sensitation to tuberculo-protein can be induced by bacillary emulsion, with watery extracts, and with the non-poisonous residue.

The administration of horse-serum for therapeutic purposes, as has been mentioned, is occasionally followed by symptoms of anaphylactic shock. The alarming symptoms following the use of diphtheria antitoxin and other sera are fortunately so rare that they should not prevent the use of these remedies when indicated. However certain precautions should be used which may aid in avoiding untoward effects.

Diphtheria and tetanus antitoxin are supplied in this country in the form of the refined and concentrated globulin preparations from which a large proportion of the foreign albumin contained in horse-serum has been removed. Such products are recommended for use exclusively wherever possible.

A preliminary test can be made to determine the sensitiveness of an individual to the serum employed. This can be done by injecting a very small test dose, 0.05 cc. of the serum, and waiting one hour for the possible development of toxic symptoms. The injection may be safely made if no symptoms of poisoning occur provided the interval of time following this test injection is not sufficiently long to allow the development of sensitation. Experimental evidence seems to show that the preliminary injection of atropine is of benefit Should symptoms of sensitation develop immediately or soon after the injection, the use of ether by inhalation has been recommended.

The peculiar idiosyncrasies which some individuals show to certain protein articles of diet such as buckwheat, peas, cheese, fish, oysters, strawberries, pork, eggs, cow's milk, etc., are evidences of protein sensitation or anaphylaxis. Such suggestive symptoms as urticaria, more or less generalized in extent and accompanied by intense itching are quite constant. Numerous cases of urticaria with dyspnea, and occasionally inco-ordination of the lower extremities have been reported as occuring in susceptible individuals after partaking of any food containing egg-albumin. Of importance is the fact that these symptoms of poisoning develop rapidly after the protein food has reached the alimentary tract of the sensitized individual. Through some abnormal condition of the intestinal mucosa the unchanged protein was admitted and diffused throughout the body. Under normal conditions the proteins in our food undergo complete enteric digestion into simple and harmless end-products.

Local sensitation is of common occurance in the skin and mucous membrane of the alimentary and respiratory tracts brought about by the deposition of foreign proteins in these tissues. Hay-fever is a typical illustration as an anaphylactic reaction to various pollens deposited in the mucous membrane of the respiratory tract and there split-up into poisonous substances. The experimental injection of a hay-fever subject with a suspension of pollen produced the typical symptoms of hay-fever. Our common colds are instances

of local sensitation. The asthmatic symptoms that appear in certain persons when exposed to odors from the horse are explainable as anaphylactic reactions.

The various phenomena of infectious diseases, intermittent and remittent fevers, crises and collapses, are expressions of protein sensitation or anaphylaxis. The collapse in typhoid, and the crises in pneumonia seem to be brought by the disruption of a large quantity of bacterial proteins at one time.

In this discussion we have endeavered to show in a general way, the role that anaphylaxis may play in giving us newer ideas and clearer understanding of various phenomena in infections and other diseases. It is hoped and there is promise that future studies of disease and its phenomena from this aspect will aid in the solution of some of our great medical problems.

Discussion

W. L. Bierring, Des Moines: I think the Society should be congratulated on this clear and scientific presentation of so difficult a subject. While this may seem to be a proper theme only for the laboratory worker, there is little question but that this phenomenon which is variously called anaphylaxis, allergism, or protein sensitization is going to play a very important part in our clinical studies.

It enters very largely into a number of distinct disease processes, which are familiar to us, prominent among them being the various serum diseases that are the result of the administration of therapeutic and prophylactic sera. As regards its experimental administration, it seems that it requires but a very small dose to sensitize an animal to a particular protein; that it requires a larger dose to produce the state of so-called anaphylactic shock, but even this so-called anaphylactic dose is very much smaller than the real toxic dose of the particular protein, and that has a bearing upon its application in human clinical conditions; that this particular sensitization process can be transferred from one animal to another in the so-called passive anaphylaxis; that it presents itself under different forms in different lower animals, in that in the guinea pig it produces a complete mobilizing of the lungs; in the rabbit it produces a condition of heart-block; and in the dog a peculiar motor-paresis of the gastro-intestinal tract.

It is an interesting correlation that the essayist makes between the studies of Vaughan and this condition of anaphylaxis, in that he gives tribute to the great work of Vaughan in really giving us the best explanation, not only of anaphylaxis or protein sensitization, but of the real problem of infection; that infection from any infectious virus is the result, not of the growth of the micro-organism, but rather of the production of so-called prophylactic substances which, when they are developed in sufficient amount the period of incubation, split up the foreign proteid, whatever it is, and as a result of this splitting process the different phenomena of the disease in question are developed.

An interesting feature which should perhaps be emphasized here is, that, at least in an experimental way, the German and French investigators have succeeded in producing a so-called state of de-sensitization. They have produced in the lower animals a condition which is the opposite of the state of sensitization, and if this were possible in the human being, no doubt we would be able in time to also overcome the hyper-sensitized state met with in the use of different sera in human beings.

While we regard this as a dangerous and alarming condition, it should not divert or prevent us from the use of the different therapeutic sera, because at no time are the dangers incident to anaphylactic results comparable in any way to the dangers of the disease for which the sera are applied.

Dr. Harnagel of Des Moines made an interesting observation which he expects to publish soon, upon two cases of ecchinococcus of the liver, in which after the echinococcus cysts of the liver were treated surgically by

drainage, there developed in the course of a few days the definite symptoms of anaphylactic shock, illustrating that the sudden influx into the system of a greater amount of the ecchinococcus proteid was sufficient to produce the symptoms referred to.

No doubt many of the disturbing symptoms that have resulted from puncture of serous cavities, like the draining of the pleural cavity, may also be the result of over-sensitization. In speaking to Dr. Auer of the Rockefeller Institute, who favored us recently with a discussion of this subject on the different phazes of anaphylaxis, he suggested the term anaphylactoid, and to defer a more accurate definition until laboratory experimentation shows them to be real examples of anaphylaxis.

Dr. Loes: I was very glad to hear Dr. Bierring's interesting and instructive remarks on this subject. In regard to the protein poisons they are much more powerful than our ordinary chemical poisons. For instance, it has been found that the injection of a guinea-pig with one-millionth of a gram of pure egg-albumin is sufficient to sensitize that animal so that the intravenous reinjection of one-tenth to one-twentieth of a millegram of the same substance proves fatal to the animal.

The interesting experiments on the dog and the rabbit which Dr. Bierring just mentioned have been extensively studied by Dr. Auer, who recently addressed the Des Moines Pathological Society. Electrocardiographic examination of dogs and rabbits during anaphylactic shock revealed various and marked cardiac disturbances. Dr. Auer concludes from these experiments that it is therefore possible that anaphylaxis plays a role in the causation of certain cardiac derangements in man.

In the use of therapeutic sera, as Dr. Bierring stated, we must not consider too seriously serum disease and the occasional fatal result following the use of diphtheria antitoxin. Diphtheria antitoxin is now supplied in this country most commonly in the form of the refined and concentrated globulin preparations. In these the foreign proteins such as albumin, etc. have been largely removed. These concentrated preparations of diphtheria antitoxin contain from 2000 to 3000 units of antitoxin per cubic centimeter.

Since it has been found that animals of the same species may be made anaphylactic not only with placental tissue but also with the amniotic fluid and fetal serum it is hoped that further studies along these lines will bring enlightenment on puerperal eclampsia.

From the view point of anaphylaxis the cancer problem has been extensively studied by J. Walter Vaughan. Likewise the study of tuberculosis from this aspect is a rich field. Various means have been employed to modify the tubercle bacillus so that it could be used as a vaccine, but no suitable tubercle protein sensitizer has as yet been found. The nearest approach to this desired substance, as Vaughan states, is the non-poisonous protein of the protein molecule. It is hoped, and recent work adds assurance, that it may be possible to secure immunity to tuberculosis by means of a vaccine.

In the study of anaphylactic phenomena Von Pirquet has disregarded test-tube experiments and has replaced these methods by a study of the reactions occurring in an organism during the course of an infection, or study of the changes in the organism itself resulting from the infection or intoxication. His brilliant studies of serum disease vaccinia and smallpox, tuberculosis, etc. are well known.

Of syphilis Von Pirquet mentions that the course of this disease indicates that it will prove a very interesting field for the study of allergic phenomena. To quote from Von Pirquet's excellent treatise "Allergy", (Archives of Internal Medicine, February 1911); "I personally feel quite sure that it will be possible to make the diagnosis of syphilis by means of cutaneous and subcutaneous inoculation as soon as the syphilitic virus can be obtained in pure cultures." Pure cultures of treponema pallidum have been obtained and Noguchi has made known his specific cutaneous reaction for syphilis known as the Luetin reaction.

ADOLESCENCE, ITS RELATION TO PRIMARY AND SECONDARY DISEASE*

FRANK M. FULLER, M. D., Keokuk.

There is much in medical literature regarding the influence of the menopause upon general physical conditions. There is much more in general lay reports concerning this critical time in woman's life which, fortunately, is not true.

We have volumes written now regarding the influence of internal secretions and their failure in both men and women past the meridian of life, but a careful search of general literature, and that confined to pediatrics, reveals very little attention has been given to that period of human life which is generally included under the name of puberty or adolescence. And yet during these years from 12 to 20 in females and 14 to 21 in males, there are more profound changes in body, mind, and character than in any other period in the whole span of life. Children who have passed the time of greatest liability to the specific diseases of childhood, including the infections, have such demands put upon their physical economy during the years of adolescence that resistance is decidedly lowered, and while mortality is less, sickness of both the acute type and more especially of subacute type is greatly increased. These are the years when the ordinary advantages of fresh air, exercise and freedom from care are at their best.

Those influences which commonly tend to protect the physical life and which we consider most important in prophylaxis, are most active, yet we see during this period decided tendencies to anemia, chlorosis, faulty bone development, physical weakness, hysteria, cardiac diseases in girls, and rheumatism, muscular dystrophies, mental and moral aberrations, bone diseases in boys and decided increase of tuberculosis and digestive disturbance in both sexes.

If such stress is laid upon the so-called "change of life" at the close of the reproductive period, and so many variations of physical and mental well being are due to the influence of this change, why should we neglect the greater change which takes place at the beginning of the reproductive age when so much depends upon the proper guidance of the child during these years.

There is an average normal development in weight, height, and along all anatomical and physiological lines. As we begin to know more regarding the normal we can more properly guage the abnormal, and as we do we will find that much of the disease and physical disability apparent during puberty has a definite relation to abnormality of growth.

A study of the valuable statistics of Axel Key as quoted by

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Seitz (P. & S.) reveals that "the increase and growth in weight and length exhibit periodic changes and do not follow each other closely; growth in height is apt to precede increase in weight. An increased gain in weight which characterizes the more vigorous time of puberty lasts from the 12th year to the 15th year. While growth generally stops at the 17th year, marked increase in weight continues up to or later than the 20th year. The weight increases in greatest proportion in the 16th year. Boys until the eleventh year exceed girls in length and weight. Girls are larger until the sixteenth year and then drop behind the male sex."

These are merely the grosser physical changes. During this growth there is the wonderful development of specialized cells in the male and female which go to the perfection of reproduction. Pelvic organs, mammary glands, testes, and spermatic vessels are diffrentiated by special internal secretions. Menstruation and recognized sexual life develops with great rapidity but the processes associated with these great changes cover years of time. They exert a material influence on the health and future of the individual. You who have spent years in medical work have seen scores of girls, growing like young amazons, along with their male companions, having all the evidences of good health, and yet during the years of adolescence have seen them degenerate into anemic or chlorotic girls with palpitating dilated hearts, and neurotic tendency. Have you ever asked yourself why girls should undergo such degeneracy during puberty or why boys so often full of promise for a strong manhood, should fail as they cross the tape in life's great race? Have you ever felt a greater responsibility for guiding these valuable craft off the rocks of adolescence than the mere empiric statement that puberty is a dangerous period.

When you realize that the actual physical change in the size of the heart during puberty is as great often as 15 to 20 per cent of its weight, and that this great increase of the heart is not always accompanied by a correspondingly large increase in the blood vessels within the same time, it helps to understand some of the cases of dilated and hypertrophied hearts during adolescence.

When to the actual physical condition is added the psychic influence due to a delayed menstruation and the anemia so common in tall thin growing girls of 14 to 16, is it surprising that we find irregular heart action? Chronic heart troubles, so frequently following in the years of adolescence, may often be prevented by a closer study of the whole pubertal history of the individual. Many a heart which has apparently stood the toxic strain of an infectious disease in earlier childhood succumbs to the added assault of the enormous growth of puberty and adolescence.

During adolescence there is marked increase in depth and breadth of the thorax. The lungs actually increase in size as well

as in respiratory capacity. At times this increase is very rapid to assist in compensating the general body growth.

In spite of augmented oxygenating surface, there is a decided increase in tendency to tuberculosis in both males and females. In a study of about 900 fatal cases occurring in Lee county, Iowa, in 26 years, the rate of death increased from 21 during ages of 5 to 15 to 146 during the ages of 15 to 25. This may be due in part to confinement in the early part of this period in close school rooms, or in the latter part to unsanitary factory or office life, but undoubtedly there is an influence, in certain cases, through the physical and psychic strain arising directly from the changes of adolescence. However closely we may define the predisposing etiology in these cases of tuberculosis, yet the constant fact is before us that it is during the growing years that the disease begins its great increase. A closer study of the evidences of incipient tuberculosis of the lungs or mediastinal glandular tuberculosis will reveal many a case masked by its anemia, loss of appetite, strength, and weight, which is too often assumed to be met by some useless tonic, and the crass assurance that the youth will finally outgrow it.

It is during the years of adolescence that grave diseases of the kidneys secondary to infectious toxemias so frequently come to their first real manifestation. It is more proper to say that this occurs more commonly just following the years of this development. It must not be forgotten however that there is a form of albuminuria which occurs during puberty, is transient but recurring and disappears after full development. This is found in tall thin anemic boys and girls. They are generally weak individuals, tire easily and are very prone to headaches and digestive disturbances. Great care must be exercised in the prognosis of these cases. I have seen several in which I was convinced that there was present a definite nephritis, and yet which cleared completely after attaining maturity.

In the thyroid gland there is a very marked physiological congestion during adolescence, and this increase in size is so great often during menstruation that parents bring the girl for consultation. If through the wearing of constricting high collars, or through the influence of hard labor, or acute disease, or the development of pregnancy during adolescence, the normal but transient congestion is maintained over a long period, there can be developed a chronic goitre.

The physiologic congestion is always transient, but because of that, too many physicians neglect to give to parents proper advice. Undoubtedly our prophylaxis can be materially widened by a more careful observation of the normal and the abnormal during puberty. There seems to be good ground for the claim of some authors that "the special morphological growth of the genital organs of both sexes and the development of puberty are dependent upon the normal growth and function of the thyroid gland."

During the time of puberty, and indeed the whole period of adolescence, there is found in no organ or tissue of the body, greater evidence of disturbed equilibrium, if not pathologic change, than in the nervous system. Both boys and girls reveal at this time problems in mental, moral, and social life that are the despair of parent, teacher, and physician. Boys who have been alert, active, obedient, and purposeful, become heavy, dull, indifferent, lazy, and forgetful. Girls whose lives have been guarded and who seem clear in their aims, grow moody, sentimental, hysterical. Their course "fixed by no friendly star is by each star distracted in turn."

It must not be overlooked that during about one and one-half to two years in the middle of adolescence—or during the period of greatest increase in body weight and most rapid morphological sexual development—there is practically a cessasion of mental growth. There seems to be a period of almost mental quiescence, a sleeping of the controlling ego, and the boy or girl is subject to the most variable emotions. Uncertainty of decision. Motive is as variable as the wind. Impulse and not reason is in control. Responsibility is variable because the very tumult of physical growth limits all rational action. It is during this period of profound physical change that we find temporary nervous disturbances merging into pathological states.

General nervous conditions common to most adolescents will, in certain cases with inherited tenderness, develop into a nerve excitability. Headaches of the migraine type are common. They are preceded by restlessness, dizziness, and followed by vomiting and a long period of sleep. They suggest and are even akin to mild epileptic attacks.

The various psychoses and neuroses abound in adolescent life as at no other period not even excepting the menopause. The encouraging fact, however, is present that these nerve manifestations are only temporary in the great majority, if thoughtful careful attention is given to their direction, instead of dismissing them as merely another neurotic boy or girl. While these conditions are mostly temporary, the fact remains that the years of reproductive growth are the ones in which grave nervous diseases so prominently push to the front. Epilepsy if not developed in early childhood or if manifested only in petit mal, comes to its explosive stage most often as sexual development reaches its maturity. It frequently then furnishes the denouoment of a long line of indefinite history. Of all the forms of mental weakness which do not have their origin in very early childhood, dementia precox stands out as the preeminent one in adolescence.

Not infrequently many of the milder symptoms of dementia precox are manifest in normal individuals as a result of the changes due to adolescence. They should be very thoughtfully studied and

the whole clinical history reviewed before diagnosisng a condition the outcome of which is necessarily tragic.

It should be distinctly understood that in mentioning the various nervous and mental conditions which develop during adolescence, we are fully aware of the hereditary influences which predispose to the full development, but one of the objects of this paper is to emphasize the fact that while we know the critical period of adolescence, and we know the hereditary tendency of the patient, we do not give careful attention to the diet, exercise, hygiene, and surroundings with the view to preventing many of the ravages of a time which it is our duty to protect.

The development of nutritional diseases, diseases of the blood, skin, and upper air passages are common to the years of adolescence, and are due, frequently, to the influence of the profound body change.

Menstrual disorders and distinctly sexual neurasthenias can only be mentioned here. If, however, there were more attention given to the early psychic influence in mensturation, there would be less gynecologic practice in later life.

The whole subject is one of intense interest and importance.

I will not attempt to outline the care necessary more than in a general way in adolescence.

We are realizing more that in all lines of medical endeavor we approach each case as an individual problem. After acquaintance we may find that it has much in common with others of similar age, sex period, or pathology.

But we are also realizing that while we treat individuals as such we are coming more and more to appreciate our sociological responsibility.

The great problems of adolescence are problems of our school system, its courses of study in grammar, and high schools. and their regulation of air, light, and hygiene. Supervision of sports is an important part of a doctor's responsibility to the community.

The establishment of school nurses who are competent and of school physicians who are conscientious and alert as well competent, helps to meet the general problems during adolescent years.

The active interest and true altruistic attitude of physicians toward community problems, of school sanitation, playgrounds for children, proper amusements of healthful and not harmful nature, is necessary to the full measure of our responsibility. It comes finally also to the realization of the full problem in all the children in our individual care. We are not merely the curer of disease. We are in a large sense responsible for a well being in the development of children. At no time do they tax our earnest and thoughtful and tactful attention more than during the turbulent, uncertain years when reproductive powers are developing and we are approaching a finished product.

Discussion

Gershom H. Hill, Des Moines: I think it is a very opportune and beneficial subject which has just been presented so ably and in varied phases by Dr. Fuller. I would not wish to have it implied that I am more interested in this paper than in a dozen or score of others that I have listened to this week, but it is very fortunate that at these annual meetings such a variety of subjects is presented to us for consideration. It almost seems to me that a person cannot learn in Chicago or New York or Baltimore or anywhere else in one week, and perhaps in a month, as much as he can learn by attending the meetings which have been held here this week. The oration by Dr. Macrae, for example, impresses us forcibly with the need of the thorough examination of each case presented, in order to make the proper diagnosis and to help the patient who has found it necessary to consult a physician. So it is with the subject just presented. This morning the matter of history has not been emphasized so much as it was yesterday morning by Dr. Bevan and by others.

In my sanitarium I treat very few persons of the adolescent stage. I do not have children, and seldom do I get patients who have not attained their majority. And so I would not discuss the paper in detail, but simply refer to the importance of history. This paper illustrates very admirably from my standpoint the necessity of getting the history, even in the case of a patient who is thirty, forty or fifty years old, of what occurred to that patient during his teens, as may be reported by the patient and relatives and family physician. I would simply say that while ordinarily the surgeon, and perhaps the internist, simply gets the history of the patient from birth, if they want to complete individual history, the alienist goes still farther back and gets the pedigree of the patient; and he therefore may tire the patient and all others from whom he undertakes to get history because he digs up the ancestry of the patient. He is studying in the first place the factor of heredity in each case of mental impairment or derangement.

The doctor simply referred to one form of mental derangement, which is a very popular term already. I think dementia praecox was never used to amount to anything by the general practitioner, by the surgeon, and by persons who do not give much atention to mental derangement, until within ten or twenty years; but it is a fact that in any one of our four state hospitals surely one-fourth, if not one-third, of those cases of mental derangement which accumulate there, and in the county asylums, are cases of dementia praecox; and I wish to connect that subject up to this paper, without discussing any other phase of it, and to say that the name indicates the condition. The mental symptoms manifested in a case of dementia praecox are those of mental weakness rather than those of mania or melancholia or delusions or disorderly conduct. When you come to look over the career of a patient up to the time of examination, and see that the symptoms revealed as connected with the mind are those of a crippled or sub-normal or weak mind, they must be differentiated, of course, from the cases of imbecility, which are congenital, and differ from insanity, which is an acquired mental state. In conclusion I will simply state that I am glad the doctor put that kind of insanity in his paper, because it embraces a very large part of the deranged people in Iowa.

Dr. Fuller: I have nothing further to say, except that before I heard it I did not know just exactly what kind of insanity was in the paper; but I am glad that our specialist picked out just what kind I put in it.

THE NON-OPERATIVE TREATMENT OF FRACTURES OF THE FEMUR*

A. W. SHERMAN, M. D., Burlington.

My excuse for presenting this subject at this time is the belief that a great many physicians, generally surgically inclined, resort to the surgical treatment of these fractures before conservative treatment has been given a reasonable trial. This belief has been emphasized recently in two cases of serious fractures of the femur, where the consultants strongly favored the open treatment, however the nonoperative treatment was decided upon with most satisfactory results, in each case, and that without any complications whatever, and bony union took place within a very reasonable period of time. These observations have convinced me that there is a tendency, at this time, to neglect the old tried methods, that have always given good results in the past, to adopt the more recent, but perhaps not more practical, open method. I am fully convinced that certain fractures, when properly selected, and when skilled services can be secured, are better handled, and should receive the open treatment, but in those cases cared for by a surgeon of limited skill, and experience in the operative treatment of fracture cases, it will be the part of wisdom to exhaust every energy in getting results by the non-operative method of treatment.

In this paper, no effort will be made to discuss fractures of the head and neck of the femur. The discussion will be limited to fractures of the shaft. It will not be taken up in a systematic way, but will consist of suggestions of old methods, freely discussed in all works of fractures, but not adopted as frequently as I believe they should be.

The usual plan of dividing these fractures into those of the upper, middle, and lower thirds will be adopted here. They are most frequently the result of direct violence. Occasionally it is the result of indirect violence as in the case of a fall from an elevation on to the feet, in which case the bone is liable to be severely shattered, or broken in a spiral, or oblique direction. Fracture may be the result of muscular exertion. The bone may be extensively comminuted, or the fracture may be compound. While serious injury of the vessels and nerves is not common, such an injury should be kept constantly in mind.

In fractures of the upper third of the femur, the upper fragment is tilted forward by the combined action of the psoas and iliacus muscles, and at the same time it is everted, and drawn outward by the combined action of the external rotator, and glutei muscles, thus producing a marked tumifaction in the upper and outer part of the thigh. The lower fragment is drawn up by the combined

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action of the rectus muscle in front, and the ham-string muscles behind, while the abductor, and pectineus cause the limb to be everted producing an angulation at the seat of fracture.

Where the fracture is just above the condyles, the lower fragment is draws back by the gastroecnemius, and plantaris muscles. If very short, it may be displaced back into the popliteal space, and prove very difficult to reduce. This displacement is increased by the upward traction of the rectus in front and the biceps, semi-membrenosus, and semi-tendenosus behind. The upper fragment is drawn inward by the pectinious, and abductor muscles and forward by the psoas, and iliacus muscles.

It is generally easy to make a diagnosis of fracture of the femur but in occasional cases the nature of the injury may be overlooked, greatly to the detriment of the patient, and the surgeon. Where there is any question or a doubt about the nature of the injury, every aid to diagnosis should be made use of, and till the diagnosis is established, the case should be treated as one of fracture. If the injury proves less serious, no damage has been done by this conservative treatment, and if the diagnosis of fracture is confirmed, valuable time will have been saved. When a physician accepts a case of injury, he places himself under obligation to use every means at his command to establish a correct diagnosis, and apply the best methods that are known in restoring the patient to a normal condition. The object of treatment is to restore the fragments to as near their normal position as is possible, and to immobilize them in this position until firm union has taken place.

In the treatment of the three varieties of fractures of the shaft of the femur, we have two general methods at our command. We may overcome the shortening of the muscles by the use of extension, and counter-extension, and the fragments may be immobilized by the use of coaptation splints applied around the fractured bone, and the use of a long side splint extending from the axilla to the bottom of the foot. To this should be added some means that will prevent the foot from becoming everted. Where the fracture is high up on the femur, it is my belief that a much better plan, and one that should generally be adopted, is to place the limb in such a position that the strongest muscles shall be relaxed. For instance, in case of fracture of the upper third of the femur, the upper fragment is tilted forward by the ilio-psoas muscle, and is everted by the external rotator and glutei muscles. The lower fragment is drawn up, and abducted by the pectineus, and abductor group of muscles. There is an outward bending of the leg at the point of fracture. It is impossible, by direct extension, and counter-extension to fully overcome the shortening, and deformity, but if the limb is raised so that the lower fragment is brought into a line with the axis of the upper fragment, the action of the ilio-psoas, and rotator group of muscles will have been overcome, to a large extent. If the knee is

now flexed upon a double inclined plane, the action of the rectus in front, and the biceps, semi-membranosus, and semi-tendinosus muscles behind will have been overcome so that the shortening due to the action of these muscles may be overcome with a comparatively small amount of extension, and experience has shown that high fractures, when thus treated, are generally recovered from, with very little shortening, and deformity, and in the ordinary period of time.

Where the fracture is in the middle third of the femur, no better method of treatment can be found than the use of extension and counter-extension with the leg in the extended position. The foot of the bed should be elevated, so that the patient will not work down against the foot of the bed. Coaptation splints should be applied around the fractured bone, and a long side splint should be used extending from the axilla, to the bottom of the foot. Some means should be adopted to prevent the leg from becoming everted.

Where the fracture is in the lower third of the leg, there is always a tendency to a backward displacement of the lower fragment. If the fracture is low down near the condyles, this displacement may prove very annoying, and difficult to reduce on account of the action of the gastrocnemius, and plantaris muscles, sided by the action of the rectus, and hamstring muscles. Here again the stronger group of muscles must be relaxed by raising the limb till the upper fragment is brought into a direct line with the axis of the lower fragment. If the leg is now flexed at the knee, the gastrocnemius and plantaris muscles are relaxed so that the lower fragment can be easily gotten into line with the upper fragment. The limb should be fixed on a double inclined plain, with extension, if possible, in line with the axis of the femur. Where the muscles have been relaxed, as just advised, the shortening, and displacement are very easily overcome, and the rule is that the fragments unite in good position, and with very little shortening. In this kind of a fracture, it is very important that passive movements, and massage should be commenced as soon as possible without injuring the parts.

The surgeon's obligation to the patient does not end when bony union has apparently taken place. As a rule the splints should be removed gradually by removing them for a few hours during the day, and replacing them during the night so that if union has not become as solid as had been hoped, he will have an opportunity to replace them before harm has been done. If the fracture has been near a joint, it will be advisable to keep up massage, and passive movements for a time, or till the joint has been restored to usefulness. The limb should not be used till the surgeon is fully convinced that the union has become solid.

Massage of a fractured limb is of very great value. It should be commenced as soon as union has formed so that the limb can be manipulated without doing harm. No definite rule can be laid down

as to just when this time has arrived. The experience, and judgment of the surgeon must decide this point. Massage relieves the pain and soreness. It reduces the swelling by improving the circulation. The improved circulation hastens the formulation of callus, and shortens the period of convalescence.

In closing I want to repeat, that if the fracture is near either the upper, or lower end of the femur, the stronger group of muscles must be relaxed, and the limb placed in such a position that the axis of each fragment will be in the same line, and the limb must be fixed in this position if ideal results are to be looked for.

THE CONSERVATION IDEA IN NASAL SURGERY*

L. L. HENNINGER, M. D., Council Bluffs.

It is not without hesitancy that I take the liberty of presenting this subject to this section. It is not always an easy task to say just what one feels incumbent to say without appearing to say too much, therefore I wish right here to disclaim any spirit of criticism in making these rambling remarks, the object of which is to open up avenues for thought and to invite an interchange of ideas.

The analogy between the subject of conservation of our natural resources which has consumed so much of the time and attention of our politicians and men of thought in late years, and the subject of conservation as applied to nasal surgery, is perhaps a little far fetched or obscure, but it will be admitted that each has the same object in view, namely, the preservation of what has been given us by nature for our own use and comfort and therefore the analogy is apropos.

The object of all surgery is, or should be, to restore to or approximate a normal and healthful state, tissues and structures which perhaps from a multiplicity of causes have become abnormal or pathological. But before entering into a detailed description of some of the pathological conditions in the nose calling for operative interference let us pause for a moment to consider what is a normal condition. The function of the nose properly performed should suggest or determine just what this should be. To moisten and warm the air before it is passed on into the pharynx, larynx, trachea, bronchi, and the terminal cells in the lungs is one of the most important of the functions of the nose. According to Aschenbrandt and Kayser, the inspired air receives from 20° to 40° of heat and becomes saturated or nearly so in its passage through the nose. This renders it suitable for the interchange of oxygen and carbonic acid gas in the lungs,—a simple action of osmosis which takes place most

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perfectly when, with warm fluid on one side of a membrane there is warm, moist air on the other.

Nature has endowed the nasal organ with a marvelous amount of surface covered with mucous membrane for the radiation of heat and the giving off of moisture to the air it passes along. It is surprising the amount of moisture so given off to the air in twenty-four hours. Any lessening in this radiation surface has in proportion to its extent its effect in an improper preparation of the air with the result that cold, dry irritating atmosphere strikes the pharyngeal and laryngeal structures producing an irritation resulting in pharyngitis and laryngitis, sicca, granular pharyngitis, and opens the way for more serious diseases. Then the air must be filtered. The action of the normal nose as a filter is said to be practically perfect for Tyndall has demonstrated that the expired air is free from germs. This takes place first by action of the vibrissae, the hairs of the vestibules which hinder the entrance of large particles and next by adherence to the smaller particles to the moist surfaces of the intricate passages of the nose and naso-pharynx, and later passed off by concerted wave action of the cilia. When the nose is too roomy, or when pathological conditions interfere with this filtering process, particles may reach the lower respiratory tract. Again, ventilation and drainage of the accessory sinuses is an important function of the nose. The shelf like structure of the turbinals within the nose is ideal for this as the spacing of contiguous surfaces is so nicely and accurately arranged that it assists by capillary attraction in the flow of the viscid secretion from the various excretory orifices. The needless removal of a turbinal therefore by creating an unnatural cavity seriously interferes with approximal spacing and consequently with drainage of the sinuses, thus predisposing to disease.

Other functions such as olfaction. and phonation are also influenced by the mechanical adjustment of the parts within the nose, but will not be considered here for the lack of space.

It will be apparent from this that the structure, and arrangement of the parts within the nose in their normal state is ideal for the performance of the functions for which they were intended, also that the needless sacrifice of any part or portion of said structures during any surgical proceedure is inexcusable and to be condemned as bad surgery. For instance it would be difficult today to find a rhinologist who would be willing to unreservedly indorse the old method of drilling a hole straight back into the pharynx for the relief of nasal obstruction, regardless of the structures sacrificed and of the scar tissue, crusts, and adhesions resulting.

With the permission of the society, I will briefly mention a few pathological conditions requiring surgical interference where in former years conservative principles have been liberally interpreted or in many instances ignored entirely.

In chronic frontal sinusitis where irrigations and other procedures have not availed it is often sufficient to remove a portion of the middle turbinate, the bulla ethmoidalis and anterior ethmoids, and curette all about the outlet of the naso-frontal duct. Even less has been known to suffice. In chronic suppurative ethmoiditis, with or without polypi we can frequently remove the entire diseased area without sacrificing the middle turbinate bone. This I am in the habit of doing with a Gruenwald cutting forceps and Tieck's conchotome and a set of Hajek's curettes. This procedure is of especial value where the middle turbinal is not in itself obstructing and where the inferior turbinal is deficient or atrophic. In the latter case there is already too much vacant space in the nose and we would only make a bad condition worse by sacrificing the middle turbinal.

In chronic suppuration of the maxillary sinus it is not necessary to sacrifice the inferior turbinal or in many instances any part of it while performing the Luc-Caldwell operation or the Denker operation. The mucous membrane can be dissected up from a point a little in front of the anterior attachment of the inferior turbinal, the long attachment cut with a suitable instrument, and the bone itself turned upward out of the way while the opening is being made through the inferior meatus. Later the turbinal can be replaced and the mucous membrane sutured in place again. Of course if the inferior is hypertrophic it may be necessary to trim the fibrous excess on the inferior border.

Some authors have described a submucous resection of a hypertrophic inferior and even a middle turbinate but if such hypertrophy be fibrous and not bony I am at a loss to see how a resection of the bone alone would be of much avail.

Last but not least, the subject of bony deflections of the nasal septum. Much has been said in the recent years during which time the operation has been in vogue, for and against submucous resection of the nasal septum for the relief of obstruction, headache, neuralgias, etc., due directly or indirectly to deflections of this bony wall. In my judgment, it is one of the most convenient, most logical, and most satisfying operations that has yet been devised and which we have at our disposal for the relief of so many ills and with so little destruction of tissue. Gifford Pinchot himself could not strike a more telling blow for conservation than did the originator of the submucous resection operation. True even this leaves much to be desired in a long standing case with opposing hypertrophies, but it is by far the most effective relief for deflections of the nasal septum yet devised. We can find little excuse for the former Asch crushing operation in these later days and much less for the indiscriminate mining around and cutting away of normal tissues from around the obstruction in place of removing the obstruction itself. Especially should be condemned the mutilation or sacrifice of an

inferior turbinate in such a case as inexcusable in view of our present light and in consideration of the subsequent harmful effects of such procedure on pharynx and larynx to say nothing of the cicatrices and crusts in the nose itself. The submucous resection accomplishes the most in actual results with a minimum of tissue sacrificed and this to my mind is the best argument and a sufficient justification for its employment in all cases where septum operations are indicated.

Discussion.

Dr. H. G. Langworthy, Dubuque: The conservative idea in nasal surgery is all right if we all agree as to just what is meant by conservatism. For instance in frontal disease conservative inter-nasal operations and the use of frontal sinus rasps is good surgery and will often prevent external operations. In nasty recurring nasal cases on the other hand anything short of the removal of the entire middle turbinate and ethmoid cells is not good surgery if we look to the future and moreover is not conservatism. To-day turbinectomy or the complete removal of the inferior turbinate is not advisable and is not good surgery. Long strips of the turbinate involving a bit of the bone (when one is able to do it so easily without bleeding by repeated injections of novocain for instance) is not only conservative surgery but the best surgery. Many sphenoids I find do not need anything more than lavage if offending adjacent middle turbinate and posterior ethmoid cells are removed. Conditions in the nose which tend to resolve in synechia is anything but conservative surgery. I think our idea should be to establish at all times proper ventilation and drainage beyond all possibility of doubt which is both radical in one case and conservative in another. The judgement of the operator and the post-operative success will indicate to a certain extent the method of procedure. Nasal surgery which falls short of preventing future secondary troubles or requires later completing operations should certainly be avoided if possible.

Dr. Robert Levy, Denver, Colo.: A conservative spirit should animate our profession to-day. I am glad that so many of the younger men to-day appreciate this fact. Much harm has been done by indiscriminate surgery in the past just as by lack of good surgery, both of which has placed us in a bad light. We should certainly leave the lower turbinate alone as much as possible taking care at all times not to secure too much nasal space which is sure to result later in distressing atrophic conditions. In septum work also we should be controlled by good surgical judgement, all of which requires considerable experience.

Dr. W. J. Bussey, Sioux City: I would have disliked to have been deprived of the opportunity of hearing this paper, and yet it is a matter of some regret to me that it could not have been presented before the general sessions of the society. Many men not limiting their work entirely to our specialty, are doing nasal surgery, and it has been my observation that this form of surgery usually attacks the inferior turbinals. We see very many cases where a patient in order to be relieved of a more or less pronounced nasal stenosis has had one or both inferior turbinals removed in whole or in part. I believe that in the great majority of cases, these patients are subjected to a procedure that is uncalled for, is bad surgery, leaving the nose in a worse condition than before.

This paper therefore, is very timely, because of the emphasis it gives to so many necessary conservative features of nasal surgery.

Dr. J. C. Beck, Chicago, Ill.: This has been an interesting discussion and I am inclined along the same ideas as expressed by Dr. Langworthy. The inferior turbinate body for instance is as a rule too severely dealt with. During the last eighteen months I have been removing a part of the inferior turbinate where they show generation as they usually do by crushing along a straight line on the inferior border. I do not believe especially in conservatism as applies to the upper part of the nose and have never seen bad effects from removal of middle turbinates and ethmoid cells. As to the septum it is not necessary to remove all of a deviated septum but sufficient to insure mechanical success. As time goes on

I am becoming more and more inclined to remove ridges and spurs submucously without doing a typical submucous resection.

Dr. F. E. Franchere, Sioux City: I believe that conservatism wherever possible is to our patients' best interest. In a class of cases representing slight nasal obstruction, showing nothing more than simple hypertrophy, very often active elimination will produce good results without surgery at all.

Dr. Henninger in closing: I am very glad of so generous a discussion on this subject which was really the prime object of the paper. The object of conservatism is I think to accomplish a desired result with the least possible destruction of tissue . Unnatural spaces in the nasal cavity are to be avoided if capillary attraction is to be maintained. Many times slight, well-directed operations will accomplish all that is necessary.

HYSTEROTOMY AS A METHOD OF TERMINATING PREGNANCY*

CARL W. WAHRER, M. D., F. A. C. S., Ft. Madison.

Hysterotomy through an abdominal median incision has been the subject of several papers in the past two years. Deaver has for many years advocated hysterotomy as the method of choice in placenta previa and in a more recent paper published in the Journal A.M.A. July 13th 1912 he advocates hysterotomy for four conditions—(a) all cases of placenta previa, (b) neglected cases of the toxemia of pregnancy, (c) as a diagnostic measure to determine the question between soft myoma and pregnancy and (d) as a diagnostic measure in suspected carcinoma.

He even suggests hysterotomy as a method of removing a retained placenta. Such extreme views more radical than the suggestion I have to offer, gives me courage to suggest hysterotomy as the operation of choice in terminating pregnancy, especially in cases where it is desirable to prevent future pregnancy.

It is rather strange that so far as I am aware hysterotomy has not been advocated as a routine method of abortion, especially as it has undoubtedly been done by hundreds of operators on occasional cases, usually where the abdomen has been opened as a result of a mistaken diagnosis. Most of these operators must have been impressed with the rapid, easy recovery of the patient which always follows hysterotomy in the early months of pregnancy. The objections to the usual methods of terminating pregnancy are many. In the early weeks of pregnancy the usual method is the curette followed by the ovum forceps. That the curette is an incertain instrument is attested by the old story current around every large hospital, of the surgeon who curetted and several days later learned that the patient had aborted.

This is not a myth, it happens often. I remember an instance where a well known gynecologist, author of a text book on diagnosis, based a diagnosis of ectopic pregnancy on the fact that he had curetted the uterus without finding any evidence of uterine preg-

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*Read before the Lee County Society, Dec. 30, 1913.

nancy. Laparotomy revealed a pregnant uterus drawn to one side by adhesions. In addition to being uncertain the curette is a dangerous instrument in a pregnant uterus. Perforation of the uterus is not an uncommon accident even with careful and skilled operators. Again, the curette and ovum forceps cannot empty the uterus completely, portions of the ovum and placenta are left behind, increasing the danger of infection and hemorrhage.

From the third to the sixth month the uterus is emptied by some operators at one sitting; in such cases the cervix is usually torn, or the bladder is pushed up and the anterior lip of the cervix divided, a more formidable procedure to patient and operator than laparotomy. Where the operator elects to use the dilating bog or gauze pack, the patient usually is subjected to two anesthetics, with a long wait between and the method is a very uncertain one at best with increased risk of infection and hemorrhage.

I have terminated pregnancy four times by abdominal hysterotomy, once in the third, twice in the fourth and once in the fifth month. In three of these cases the tubes were divided and the ends buried in the broad ligaments. The abdomen is opened by a small incision, the uterus drawn up and opened by a small median incision in the fundus, the ovum easily expelled and with the finger and curette decidua as well as all remnants of the ovum are removed, the uterus is sutured with cat gut and the abdomen closed. The recovery is similar to that of an interval appendectomy. There is no chance of leaving any tissue behind, no risk of infection or hemorrhage, no unknown trauma to the uterus. One of the greatest advantages is the fact that the tubes can, when necessary be divided and future pregnancy prevented and this is desirable in many cases where therapeutic abortion is necessary. In such cases I believe hysterotomy through an abdominal incision should always be the operation of choice.

SOME THINGS ABOUT GASTRIC ULCER

E. A. HANSKE, M. D., Bellevue.

Any one who studies the clinical aspects of gastric ulcer in an unprejudiced manner, will soon conceive that our knowledge of the gravest of all the affections of the stomach is rather scanty.

I have chosen to treat this subject from the point of view inspired by an eminent internist in an eastern hospital last summer.

I will not attempt to discuss this from a surgical standpoint as from his remark you will see influenced me to investigate the hospital's definite treatment in gastric ulcer.

I expect to enlarge this paper at a subsequent meeting from a surgical standpoint for operations in unselected cases of gastric ulcer and duodenal ulcer can be carried out with a death rate of less than 3 per cent and carries with it relief in certainly 96 per cent of the cases and the probability of a cure in 80 per cent. Despite this fact he said, all the good results obtained from the surgical treatment of ulcers was due entirely to our after treatment which they apply after operation. He also discussed the scar-hernia-vicious circle and danger of peritonitis often following operations. He also said it was impossible to ligate the pylorus of the stomach with the strongest silk, for in tissue the cotractures would establish an opening.

If we stop to consider that all persons suffering from various disorders of the stomach 7.8 per cent are ulcers that the average duration of symptoms is 12 years, that pain occurs in 94 per cent and is more frequent in high acidity; that pain appears almost immediately after taking foods, at times long after may be duodenal; that intermission of pain from one month to many months; that in 90 per cent there is tenderness in the epigastric area and the dorsal area in 32 per cent; that vomiting is prominent in 67 per cent; hematemesis present in 22 per cent; malena in 51 per cent and occult blood in 81 per cent; which in a general way gives one a suggestion of the many symptoms.

In order to have you understand the object of the treatment I wish to present, I will refresh your minds of the acid control of the pylorus, the study of which has given us more information in the diseases of the stomach than any one thing. Following Walter B. Cannon's description explaining the striking differences in the rate of discharge of the different food stuffs.

What is the pyloric mechanism whereby carbohydrates, not digested by gastric juice, are permitted to pass quickly into the small intestine to be digested, whereas proteins, digested in the stomach are there retained to undergo digestion. Investigators have hitherto regarded factors in the stomach or factors in the intestines as controlling gastric evacuation; a theory based on evidence of opposed

effects from a single stimulus acting first in the stomach and later in the duodenum was propounded to explain the differential discharge of the different food stuffs.

The theory is that acid coming to the pylorus causes a relaxation of the sphincter. This explains why the initial discharge is longer delayed when proteins are fed than when carbohydrates are fed. Both carbohydrates and protein stimulate gastric juice in abundance inasmuch as carbohydrates do not unite chemically with the acid, free acid is at once present in the stomach, carbohydrates would therefore begin almost immediately to pass through the pylorus, proteins on the other hand join with the acid and thus retard for some time the development of an acid reaction, the protein discharge would be retarded but acid on the stomach side of the pylorus is not the only control of pyloric action since it has been shown that acid in the duodenum does not stop gastric peristalsis, the acid reflex from the duodenum must effect the pyloric sphincter. The second statement in the theory naturally follows, acid in the duodenum closes the pylorus.

It is probable that the pyloric sphincter has normally a greater or less degree of tonic contractions with occasional relaxation, certainly it has a tonic contraction persistently strong for some time after food enters the stomach.

When protein is fed, peristaltic constrictions may press the food against the pylorus repeatedly for a half hour or more without forcing food through the orifice on account of uniting with hydrochloric acid.

Then to summonarize free hydrochloric acid in the stomach causes the pylorus to open. Free hydrochloric acid in the duodenum causes it to close. The hydrochloric acid on the duodenal side is called secretin, a coined word, called so because its effect on the pancreas causes secretion which is alkali causing it to close again by neutralizing the hydrochloric acid. So you can readily see carbohydrates use least amount of hydrochloric acid, also fats, so it seems logical to feed carbohydrates as it reduces hydrochloric acid, a stimulating factor in producing ulcer.

Hyperacidity can cause stasis, same as ulcer causes contractions.

The treatment is divided into two groups:

Acute forms; either during or immediately following hemorrhage. Just a word here in regard to hemorrhage. Often the advent of bleeding frightens not only the patient but the physician as well. The physician should remember that fatal hemorrhage from gastric ulcer is comparatively rare, probably no more than 1 to 3 per cent of the patients dying during hemorrrhage. This is shown by statistics. Moderate hemorrhages are not dangerous to life although they may become dangerous when often repeated.

Chronic form · when hemorrhage is not a cardinal symptom, not anemic. In the acute form to check bleeding, the gastric lavage is

employed; with lavage carefully performed the danger of perforation by over distention is out of the question. On the contrary, lavage exerts its greatest benefits by doing away with the real cause of our distention by removing the large quantities of blood-acid secretion, food remnants, and gas which are usually present in such cases and often producing an enormous distention of the stomach.

Sometimes a continued bleeding occurs because no thrombus is formed, with checked bleeding. Following lavage it is a good plan to introduce one or two teaspoonfuls of the subnitrate of bismuth while not astringent enough to cause the constriction of vessels, it aids coagulation of the blood and is soothing to the stomach. When bleeding comes to a standstill, absolute immobilization of patient for several days, ice caps over the epigastric area, and prolonging rest according to severity. A hypodermic of morphine and arophine to keep quiet. Six to eight ounces of warm salt solution by the rectum four times during twenty-four hours. Give slowly and carefully. Give nothing by mouth. Continue this treatment for three days. If improvement occurs, place at end of this time in second group. First three or four days give two ounces of milk, one powdered soda cracker, sugar to suit taste. Give this mixture every two hours night and day by mouth. If pain occurs give sodium bi-carb to keep down hyperacidity, 30 grains every two hours, or increase dose to control pain. After three more days if improvement continues double milk and crackers and give every three hours, and in this manner keep doubling food till sufficient. You may continue this diet from two to three weeks. From this time on diet is increased by the addition of carbohydrates—one at a time to determine their effect. Oatmeal, rice, tapioca, bread, sugar in addition milk and cream without the addition of any animal food for six months. Then add protein and nitrogen in balance with this diet; object to keep down protein as proteins, as was shown, unites with the hydrochloric acid and causes most strain on juices of digestion. Increased acid or hyperacidity causes gastric ulcer. Extract of beef or canned soups contraindicated as it stimulates gastric secretion, just what we wish to avoid, excess of hydrochloric acid. Fruits not for six months.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

EDITORIAL

Verdict Against Drs. Carr and Brannon.

The jury in the trial of Inguersen vs. Carr and Brannon, awarded a verdict of $1500.00. The verdict was unjust and ought to be appealed. The case was a man about 50 years of age who sustained a fracture of the surgical neck of the humerus. The violence causing the injury was of such a character as to force the upper end of the lower fragment into the axilla and seriously injured the brachial plexus of nerves. A paralysis of the muscles of the forearm and hand followed; the muscles were atrophied and the fingers and thumb flexed upon the palm. The paralysis was noticed on the second or third day. The fracture was a transverse fracture and was easily reduced and dressed in the usual manner and a shoulder splint or cap extending to near the elbow, an axillary pad and the forearm supported by a broad bandage to the body. At the end of six weeks it was found that union had not taken place and that the paralysis continued. Dr. Brannon advised the patient to go to a prominent surgeon at Sioux City. The patient selected another surgeon, who made x-ray plate with a static machine and print which were not properly identified and were so poor that it would be difficult to determine what part of the body they represented, but as far as could be determined, the fracture was transverse. The Doctor testified that he found the musculo-spiral nerve and a piece of muscle between the fragments of bone which he released and plated the bone. This was difficult to understand as the incision was on the outer surface of the bone, exactly opposite the musculo-spiral groove, and at the surgical neck much above the point where the musculo-spiral would commonly be found. We cannot avoid the feeling that the nerve was not seen at all. The testimony of Dr. implied that the attending surgeon was negligent in not preventing the nerve getting between the ends of the fractured bone. The contention of the plaintiff was that the musculo-spiral nerve was injured through the want of skill and care on the part of Dr. Brannon, notwithstanding that there was an abundance of expert evidence to show that all the nerves of the brachial plexus were injured. The practically useless arm of course made a strong impression on the jury, the alleged finding of the musculo-spiral nerve between the fractured ends of bone by Dr. whose testimony tended to fix the blame on Dr. Brannon, and more than all else the testimony of Dr. Ross of Sioux City who attended court throughout the trial of the case to advise and assist the attorneys for the plaintiff. Dr.

Ross by means of plates and drawings and elaborate explanations, and testimony, unqualifiedly fixed the responsibility on the attending surgeons.

It is not necessary to say that the practice of medicine is at the present day a very dangerous employment, particularly the treatment of fractures. If one assumes the care of these cases, expense and trouble to the patient should not be considered. If as in this case the results are not good, operative treatment should be employed at once notwithstanding the fact that the patient lived in the country with poor surroundings, and if under such conditions operative procedures should go wrong, as they most certainly would, then the Doctor would be guilty of malpractice. The Doctor can take his choice.

Workmen's Compensation in New York.

The medical profession of New York in anticipation of the effect of Workmen's Compensation on the income of doctors, appointed a Committee to appear before the Commission to present the views of the profession with Dr. Alexander Lambert as Chairman, and Dr. Archer representing the Etna Insurance Company and the Travelers Insurance Company. The Chief Medical Adviser of the Commission, Dr. Frederick W. Longhran, participated in the conference. After various conferences it was agreed that there should be no fee less than $1.00; that the fee for office visits be $1.00; for hospital visits $1.00; visits at home of patients $2.00; night visits $3.00.

The appended fee bill was agreed upon for one year. The Committee was of the opinion that the arrangement was fair and would not be burdensome to the profession inasmuch as these patients have heretofore gone to the hospitals and received free treatment or when treated outside have often been too poor to pay even a small fee. Under the present plan, payment is certain. The practice is in no way a contract practice. Neither the New York Act or any Compensation Act that guarantees the Doctor against suits for malpractice.

MEDICAL AND SURGICAL FEE BILL.
(SCHEDULE OF RATES).
SPECIFIED INJURIES.

A. Flat rate, including first aid, operation and full treatment.
B. Operation only.
C. Total limit for full subsequent treatment.
D. Separate charges for all subsequent treatment, not to exceed total in Column "C".

AMPUTATIONS:—	A	B	C	D	
				Home	Office
Hip	$75.00	$50.00	$25.00	$1.50	$1.00
Thigh	50.00	35.00	15.00	1.50	1.00
Foot	50.00	35.00	15.00	1.50	1.00
Leg	40.00	25.00	15.00	1.50	1.00
Shoulder joint	55.00	40.00	15.00	1.50	1.00

Arm, forearm or hand	40.00	25.00	15.00	1.50	1.00
Metatarsal or metacarpal—one	20.00	10.00	10.00	....	1.00
Metatarsal or metacarpal—two or more	25.00	15.00	10.00	....	1.00
Finger or toe	15.00	5.00	10.00	....	1.00
Fingers or toes—two or more	20.00	10.00	10.00	....	1.00
Ankle joint	40.00	25.00	15.00	1.50	1.00
Knee joint	50.00	35.00	15.00	1.50	1.00
Elbow joint	40.00	25.00	15.00	1.50	1.00
Wrist joint	40.00	25.00	15.00	1.50	1.00
FRACTURES:—					
Upper arm	20.00	15.00	5.00	1.50	1.00
Forearm—one bone (shaft)	15.00	10.00	5.00	1.50	1.00
Forearm both bones (shaft)	20.00	10.00	10.00	1.50	1.00
Forearm Colles'	25.00	15.00	10.00	1.50	1.00
Femur	30.00	20.00	10.00	1.50	1.00
Lower leg—one bone	20.00	10.00	10.00	1.50	1.00
Lower leg—both bones	25.00	15.00	10.00	1.50	1.00
Jaw	20.00	10.00	10.00	1.50	1.00
Ribs—one or more	10.00	5.00	5.00	1.50	1.00
Patella	30.00	20.00	10.00	1.50	1.00
Pubic bone	15.00	2.00	13.00	1.50	1.00
Acetabulum	50.00	30.00	20.00	7.50	1.00
Metatarsal or metacarpal	5.00	2.00	3.00	1.50	1.00
Fingers—one or more	5.00	2.00	3.00	1.50	1.00
Toes—one or more	10.00	5.00	5.00	1.50	1.00
Coccyx	15.00	2.00	13.00	1.50	1.00
Sacrum	15.00	2.00	13.00	1.50	1.00
Sternum	10.00	5.00	5.00	1.50	1.00
Spine	30.00	10.00	20.00	1.50	1.00
Lachrymal bone	10.00	5.00	5.00	1.50	1.00
Malar bone	10.00	5.00	5.00	1.50	1.00
Scapula	20.00	10.00	10.00	1.50	1.00
Clavical	15.00	5.00	10.00	1.50	1.00
Nasal bones	10.00	5.00	5.00	1.50	1.00
Compound fracture—25 per cent extra.					
Operation for wiring of bones or plating—50 per cent extra.					
DISLOCATIONS:—					
Shoulder	15.00	5.00	10.00	1.50	1.00
Elbow	10.00	5.00	5.00	1.50	1.00
Wrist	10.00	5.00	5.00	1.50	1.00
Hip	25.00	10.00	15.00	1.50	1.00
Knee	20.00	5.00	15.00	1.50	1.00
Patella	10.00	5.00	5.00	1.50	1.00
Ankle	20.00	5.00	15.00	1.50	1.00
Clavicle	15.00	5.00	10.00	1.50	1.00
Fingers—one or more	3.50	1.50	2.00	1.50	1.00
Toes—one or more	5.00	2.00	3.00	1.50	1.00
Jaw	5.00	3.00	2.00	1.50	1.00
Ribs—one or more	5.00	3.00	2.00	1.50	1.00
Spine	25.00	15.00	10.00	1.50	1.00
Sternum	5.00	3.00	2.00	1.50	1.00
Coccyx	10.00	5.00	5.00	1.50	1.00
Metacarpal—one or more	5.00	3.00	2.00	1.50	1.00
Metatarsal—one or more	10.00	5.00	5.00	1.50	1.00
Carpal—one or more	5.00	3.00	2.00	1.50	1.00

Tarsal—one or more	10.00	5.00	5.00	1.50	1.00
Scapula	15.00	5.00	10.00	1.50	1.00
Pelvis	10.00	5.00	5.00	1.50	1.00
SPECIAL OPERATIONS:—					
Trephining of skull	50.00	40.00	10.00	1.50	1.00
Laparotomy for traumatic peritonitis	50.00	40.00	10.00	1.50	1.00
Fixation or suturing of kidney	75.00	50.00	25.00	1.50	1.00
Laparotomy for rupture or wound of bladder	50.00	40.00	10.00	1.50	1.00
Laparotomy for rupture or wound of liver	50.00	40.00	10.00	1.50	1.00
Laparotomy for rupture or wound of spleen	50.00	40.00	10.00	1.50	1.00
Laparotomy for rupture or wound of stomach	50.00	40.00	10.00	1.50	1.00
Laparotomy for circumscribed aneurism	50.00	40.00	10.00	1.50	1.00
Trephining bone abscess	10.00	5.00	5.00	1.50	1.00
Caries or necrosis—removal of	15.00	10.00	5.00	1.50	1.00
Tracheotomy	40.00	25.00	15.00	1.50	1.00
Intubation	10.00	5.00	5.00	1.50	1.00
Rupture of abdominal wall	25.00	10.00	15.00	1.50	1.00
Nerve—section or suturing of	10.00	5.00	5.00	1.50	1.00
Injection of antitoxin for tetanus or hydrophobia—each treatment not to exceed $25.00.					
Anthrax—cauterization or excision	25.00	10.00	15.00	1.50	1.00
Ligating important arteries (separate operation)	10.00	5.00	5.00	1.50	1.00
Ligating small arteries (separate operation)	5.00	3.00	2.00	1.50	1.00
Hernia—reduction by taxis and applying truss (subsequent treatment none	5.00	.....	.....	....	....
Herniotomy	50.00	35.00	15.00	1.50	1.00
Enucleation of eyeball	40.00	25.00	15.00	1.50	1.00
SPRAINS:—					
Shoulder	5.00	2.00	3.00	1.50	1.00
Elbow	5.00	2.00	3.00	1.50	1.00
Wrist	5.00	2.00	3.00	1.50	1.00
Hip	5.00	2.00	3.00	1.50	1.00
Knee	5.00	2.00	3.00	1.50	1.00
Ankle	5.00	2.00	3.00	1.50	1.00
All other joints	3.00	1.00	2.00	1.50	1.00
SPECIAL ITEMS:—					
Minor operations—repair of small wounds, including suturing and dressing	5.00	2.00	3.00	1.50	1.00
Repair of large wounds requiring extensive suturing and dressing	7.50	3.00	4.50	1.50	1.00
Abscess—incision	4.00	2.00	2.00	1.50	1.00
Laminectomy—(special operation)	75.00	50.00	25.00	1.50	1.00
Paracentesis, thoracics or pericardii (special operation)	15.00	10.00	5.00	1.50	1.00
Rupture of tendon—large	10.00	5.00	5.00	1.50	1.44
Rupture of tendon—small	5.00	2.50	2.50	1.50	1.00

GENERAL ITEMS:—

Assisting at operation—major	$10.00
Assisting at operation—minor	2.00 to 5.00
Mileage beyond city limits—per mile one way only	.50
Examination in lunacy—including written report and one day's attendance in Court or before Commission	50.00
Subsequent Court or Commission attendance—per day	25.00
Urinalysis—when specially requested	2.00
Complete physical examination and report by other than attending physician	3.00
Autopsy—complete with written report	50.00
Autopsy—attending but not performing	10.00
Microscopical and chemical analysis of organs	25.00 extra
Testimony in Court or before Commission as to simple fact of injury	10.00
Testimony at Coroner's Inquest	5.00
Expert testimony—per day	15.00 to 25.00
Introducing catheter	2.00
X-Ray picture—including plate	5.00
Subsequent pictures—including plates	3.00 each
General anesthetic—administration of	5.00

ORDINARY ITEMS:—

	First Aid	Office
Ordinary day visit at house, including antiseptic dressing when necessary	$2.00	$1.00
Ordinary day visit at hospital, including antiseptic dressing when necessary	1.00	1.00
Ordinary office treatment, including antiseptic dressing when necessary	1.00	1.00
Visit—including antiseptic dressing and necessary operative procedures in ordinary cases of incisions, punctures, lacerations or contusions	2.00	1.00
Night visit—9 P. M. to 7 A. M.	3.00	
Formal detailed report by attending physician at special request of insurance carrier	1.00	
First attention at office—including operative procedure and dressing of ordinary wounds	1.50	1.00
Removal of ordinary foreign body from conjunctiva, at office	1.00	
Removal of foreign body from cornea	1.50	1.00

Cases not specifically included in this schedule are to be treated on basis of day and night visits, except where special treatment is necessary. In that event, the facts (if not an emergency case) are to be submitted to the insurance carrier and arrangements made with it for such additional or special treatment

Treatments shall not exceed sixty days (as provided by the laws, section 13) from date of injury, except upon special arrangement with insurance carrier.

These fees have been established with the understanding that they include, in all cases, ordinary dressings and anesthetics, etc.,-for the proper treatment of each case, and that they will be supplied by the attending physician. It is also understood that the strictest aseptic precautions will be observed in accordance with approved methods of surgery.

It is understood that itemized bills shall be rendered immediately after treatment ceases, or in any event, at the expiration of sixty days from date of injury. Such bills are to be itemized, showing date of each visit, dressing or operation, and charge for same.

Reports relative to condition of injured employees under treatment shall be made when requested, without extra charge.

This Schedule, except as to general items, contains three systems, any one of which may be followed by the physician according to circumstances.

I. Column A shall apply when the same physician operates and also gives subsequent treatment.

II. Columns B. and C. when one physician operates and another gives subsequent treatment.

III. Columns B, C and D when one physician operates and another gives subsequent treatment. Charges for each visit to be on the basis of column D., total not to exceed column C.

That hospitals are responsible for the conduct of the physicians and nurses employed is the effect of a judgement handed down by Mr. Justice Macdonald in Vancouver, in the case of Thompson vs. Columbia Coast Mission. Thompson secured a judgement against the Columbia Coast Mission and Dr. Stuart Tidey, the superintendent, and the jury awarded him the sum of one thousand dollars. The patient was an old man in the employ of a local company, and had been paying a dollar a month to the Mission in return for medical treatment, should it be necessary. He entered the hospital suffering from a dislocated shoulder, and, possibly on account of his advanced age, the results of the treatment were not satisfactory. Upon the justness of the verdict no comment can be made as we are not in possession of the facts. We desire merely to call attention to the principles which were laid down. The judge held that the plaintiff was in a different situation from that of patients in England, who might make a choice of the institution where they would be treated, as he must either apply for treatment to the Mission Hospital or forfeit any benefit from the moneys paid by him for that purpose. The practice of monthly payments for hospital and medical attention was general throughout the province, and it was unreasonable to suppose that in the event of want of care in such medical attention the workmen could only seek redress from the physician. who might not be financially responsible, and concerning whose appointment or dismissal he had no voice.

The Special Meeting of the Iowa and Illinois District Association.

About 170 doctors from eastern Iowa and western Illinois met at the Outing Club, Davenport, Oct. 5th, to listen to addresses delivered by Dr. Richard Hart of Philadelphia, and Dr. W. J. Mayo of Rochester, Minn.

Dr. Hart has recently given up a large part of his extensive surgical practice, to take charge of the health service of the city of Philadelphia. In the appointment of Dr. Hart to this position he was given full power to reorganize and direct the public hospitals of Philadelphia and to take charge of the milk supply and to look after general public health matters. Coming as it does under the police regulation, the Doctor has almost unlimited power so far as these matters are concerned.

Dr. Hart in his address devoted himself entirely to the subject of milk supply to cities, and called attention to the fact that in this country it was extremely difficult if not impossible, to secure milk that was free

of tubercle germs, and that the only safety was in pasteurizing the milk furnished cities.

Dr. Hart's extensive surgical experience has enabled him to become quite familiar with a large number of cases of bone and joint tuberculosis, and of intestinal tuberculosis in children. He devoted considerable time to calling the attention of the profession to the wisdom of exercising as much influence as possible with the people in securing the best milk possible, and also to establish pasteurizing stations so that no milk might be sold that had not been properly sterilized.

Dr. Hart called attention particularly to the duty of the medical profession to use its influence with the public in securing such legislation as might be necessary looking towards the standardization of dairies, so that milk which is so important an article of food, and at the same time contains so many hidden dangers, may be brought to such a state of excellence that we should have occasion to mourn less and less the children who are sacrificed to the greed of those who set money gained above human life.

Dr. Mayo then took up the question of cancer from the standpoint of studying safety for the general public. It has become recognized that cancer is one of the most serious diseases that we have to contend with. It has been found that in the English hospitals where statistics are carefully kept, that in women beyond 40 years of age, one in seven die of cancer, and among men, one in fourteen die of cancer, and the statistics of American hospitals must be about the same. (75,000 deaths from cancer in the United States in 1913, and is constantly increasing. Per cent of deaths have doubled in 50 years.)

Medical men have sought by every means possible to discover the specific cause of cancer, but thus far without success. The only causative factor thus far known is irritation. Therefore organs of the body that are especially subject to irritation, are likewise subject to cancer. Old lacerations and scars that are subjected to friction are very liable as the person reaches the down-hill stage of life, to degenerate into cancer. Irritation of the mucous membrane of the mouth and tongue of decayed teeth having sharp margins and edges, are liable to set up cancerous disease. Fissures and cracks in the lips are liable to this danger. Non-malignant growths in various parts of the body, are liable under the influence of friction at some time, so be transformed into cancer. The lesson to be derived from this knowledge is that all growths and warts and scars, lacerations and unhealed ulcers, have a precancerous stage; that is a stage just short of cancer development, and if these physical defects are corrected before any extensive cancerous change takes place the individual may be spared the danger of cancer development. It is also well known that when cancer growths have reached a certain stage of development, and the disease has been transported to other parts of the body, or widely diffused in the neighborhood of the primary growth, that operative treatment is of but little avail. Dr. Mayo particularly impressed upon the profession the duty of advising patients who come to them suffering from tumors or growths of any kind, lacerations of the tongue, mucous membrane of the mouth, or any other part of the body that did not heal promptly, to submit themselves to expert examination for the purpose of determining the existence of cancer and the wisdom of an operation before the disease has extended to this hopeless limit. Every practitioner is aware of the fact that people sometimes have certain growths that they can see but are afraid if they consult the doctor he will say that it is cancer and advise operation. Now this fear should be overcome by the family doctor who comes in contact with the patient who should use his

influence to persuade the people that all these defects should be carefully inquired into by a competent diagnostician.

Dr. Mayo particularly drew attention to the fact that cancer is not an inherited disease, and that while it sometimes happens that one or two or more of a family are afflicted with cancer, it is no sign whatever that it is inherited, but it is simply a coincidence. Many people believe that cancer is a blood disease and that there is but little use in removing a local manifestation, but this is not true. Cancer is primarly a local disease; it means a growth of cells in a peculiar way and these cells remain local for a certain length of time, and then afterwards are transported to other parts of the body, and at the same time extend further and further into the tissues in the neighborhood of the primary growth. Dr. Mayo with many other experienced observers, hold to the view that cancer is a very curable disease if taken early. It must be removed at a time when it may be impossible to say with certainty whether cancer changes have taken place or not until a section of the diseased tissue is submitted to microscopic examination by frozen section. If, however, the doctor and patient consent to wait until the growth has developed the fact of whether it is cancer or not, it will then in very many cases be too late, and if the operation is now done it results in very little good. If the teachings of Dr. Mayo and those who have been associated with him in these extensive investigations in various parts of the country, could sink into the minds of the profession and of the people, we would see a far less number of people dying from this terrible disease.

Dr. Mayo also drew attention to the importance of having cancerous growths treated surgically by men who have a sufficient knowledge of the subject to execute a well planned operation for the removal of the disease, including all the structures that may be involved. He also deprecated the useless operation of cancers that had extended to a clearly hopeless stage. These operations generally do no good, but tend to increase the dread the public have to operations, and frequently influence the patient to defer operation until the very last moment. The doctor also denied the existence of what has been called cancer houses, and cancer places, that would tend to show the possible infectious nature of the disease. The view some people entertain on this point is unfortunate.

Dr. Mayo exhibited a number of pictures thrown upon a screen showing the manner in which cancer is developed in the border of ulcers and around gallstones, stones in the kidney, etc. It has been shown beyond any question of doubt that the continued irritation of gallstones and kidney stones often produce cancer.

Dr. Mayo did not wish it understood that treatment was utterly useless when the case was inoperable, but said that some benefit might be obtained from the use of x-ray and from radium, and particularly from heat and burning. These methods should never be considered in the early stage of cancer and should only be employed when case is clearly inoperable. It is not probable that these substances go very far in the cure of cancer, but at the same time they may not be without certain benefit, and especially in inoperable cases for which alone they should be employed.

Dr. Fairchild followed Dr. Mayo calling attention to the closer relation which should exist between the medical profession and the general public, and that the profession should as far as possible inspire the public with the feeling that one of the functions of the practitioner is to benefit humanity, by pointing out the danger places; that if valuable information such as Dr. Hart and Dr. Mayo presented, was to be kept exclusively within the boundaries of medical organization, that it would be a very

long time before the public could be made to understand wherein safety lies in relation to tuberculosis and cancer; that the co-operation on the part of the medical profession and public was absolutely essential to any plan of education which would lead the public to appreciate the fact that tuberculosis was in great measure an unnecessary disease, and that the number of cases of cancer could be very greatly diminished. The doctor called attention to the fact that the practice of medicine was not altogether for the purpose of securing a livelihood for those who elect to practice of medicine, but it should be a service that would extend to the welfare of the great masses of the public. The great minds in the medical profession all over the world have been devoted less to the building up of private fortune than to the accomplishing of a betterment in the physical condition of the people. In truth these men have devoted their energies more to the advancement of medicine and to public service than to any selfish personal advantage that might come to them.

Dr. Howard of the State University at Iowa City, made a strong plea for a more intelligent control of typhoid fever. He called attention to the fact that in Europe, typhoid fever was so rare as to make it difficult for the teaching hospitals of the great cities of England and Germany to find cases enough to show the students for clinical purposes. In Iowa alone there are from 350 to 400 deaths from typhoid fever every year. Dr. Howard laid particular stress on the unwillingness of the public to make any sacrifice for the control of disease or to engage in any well directed efforts to prevent it. The doctor emphasized what is well known to the profession that typhoid fever practically always comes from the water supply. There are so many cases to which water may be put that the typhoid fever germ may get into the system without being taken in with drinking water, but whatever the manner of introduction, it is essentially always through the water supply. It is therefore clear that it only requires intelligent and diligent efforts in watching water supply to practically eliminate typhoid fever. It is one of the peculiarities of our boards of health to wait until an outbreak of typhoid fever occurs before any particular effort is made to ascertain the safety of the water supply and of the sanitary conditions that exist. It is not very creditable to a community to have any considerable number of cases of typhoid fever. The existence of such cases is an evidence of carelessness on the part of the public in failing to adequately protect the water supply. One of the great difficulties in the whole matter is to impress the public that the individual has no guaranteed right to have typhoid fever, and that it is not an unreasonable restriction upon the rights of individuals to forbid them to conduct their affairs in such a way as to make them liable to the development of typhoid fever. It has been shown by numerous experiments that an individual may carry the germ of typhoid fever in his system for many months after he has recovered from the attack, and becomes thereby a veritable typhoid fever carrier, and in a position to plant the germ in the most unexpected place.

It will be seen that an evening was devoted to the consideration of the great problems of health that lie before not only the American people, but the whole world. These problems must little by little be solved through the efforts of the medical profession, sanitarians, and the public, and I think we may feel a sense of gratification that so much work has been accomplished in so short a time, when we consider that it is not more than twenty-five years ago that the medical profession stood out as a distinct calling, having for its purpose the cure of disease and the building up of private fortune. Little by little the idea has extended the practice of medicine to a certain extent as a public service, and that the better class of professional men stand out distinctly as conservators of public

health and the prevention of disease rather than to the cure of disease, which drugs have very little influence over.

The general public has come little by little to understand that the medical practitioner is an important factor in laying before the people the things that the people are beginning to feel that they ought to know, and the facts that the more intelligent are willing to be governed by, and we now see a co-operating effort on the part of right-minded people in all callings of life, to bring about a larger measure of public benefits.

The special meeting of the Iowa and Illinois Medical Association was arranged for by Dr. L. W. Littig, to secure an interesting program for October, which he succeeded in doing.

Dr. Mayo and Dr. Hart were entertained by the profession of Davenport and Rock Island in a most generous manner. These gentlemen were highly gratified and felt themselves honored by the attention which the profession so generously gave them during the days' visit in Davenport and Rock Island. Through the efforts of Dr. L. W. Littig and Dr. Allen a lunch was provided at the club house on Government Island, and a banquet at the Outing Club. The local members of the association were successful beyond their expectation in securing a large attendance. Not less than 170 members of the profession sat down at the banquet and listened to the addresses made by Dr. Mayo and Dr. Hart. Among others who took part in the discussion were Dr. Percy of Galesburg, Ill., Dr. Hare of Davenport, Ia. The work of the evening was very ably directed by the president, Dr. F. H. Gardner of Moline, Ill.

The Value of Health in Industry and War.

There is food for reflection in the fact that the exigencies of commerce, the advantageous pursuit of industrial operations, and even the preparation for real or anticipated war may promptly bring about hygienic reforms which wide-spread preaching and earnest exhortation are at best slow in promoting. The "safety first" slogan which one hears in nearly every city of the United States at the present time is one aspect of a movement to increase the personal welfare of the individual by decreasing the liability to injury through the carelessness of a fellowman. The same spirit crops out in the "ten trade commandments" of the worker which are posted conspicuously here and there in factories where personal injuries and loss of life furnish unfortunate and—let it be frankly added—unprofitable incidents in the conduct of manufacturing operations. The reminder "thou shalt not" gains added force when its value is expressed in terms of practice and daily experience rather than in the more vague language of ethical considerations. And accordingly there is a telling force in such direct admonitions as the following, from a recent compilation for use in a factory:

"Thou shalt take no unnecessary risks, nor try to show off, nor play practical jokes, for by thy carelessness thou mayest do injury which will have effect unto the third and fourth generations to follow.

"Remember thou are not the only one on the job, and that other lives are just as important as thine own.

"Thou shalt not throw matches or greasy waste on the floor, as a dirty worker is a clumsy worker, and a clumsy worker is a menace to his fellow-workers."

These and similar timely suggestions, put in a form that is sure to attract notice, cannot fail to promote the mutual and reciprocal interest of the employer and the employed. Modern hygiene and preventive medicine have recognized long ago that the individual can no longer claim a liberty in his actions, independent of his neighbor. Our provisions for

quarantine, vaccination against small-pox, and diverse other regulations in the interest of the public health have, in the past, been enforced only with the annoyance that comes from lack of cooperation and from personal resentments together with the indifference for restrictive rules that is bred in a community of "free" people.. Yet now we see, in the combined enterprise and altruism of modern employers, protective devices put in operation to secure, without friction or resentment, the same sort of welfare results that the federal government or state or municipality would find difficulty in getting under way.

The unexpected situations created by war have, in the past, furnished the stimulus for new inventions and useful processes. The armies and navies of to-day represent the most efficient fighting forces that the nations can command. No device, no agency that will contribute to their power and proparedness, is willingly neglected. Health is a prime consideration is the respect. Field Marshall Earl Kitchner is reported to have counseled the English soldiers to abstain from drinking while abroad, reminding them that their duty cannot be done unless health is preserved. The men were cautioned to keep constantly on guard against excesses. The German emperor is said to have forbidden the "treating" of the soldiers in his armies. The sale of absinthe, imported by French soldiers in an earlier war when alcohol was used to fight fever, has been restricted in Paris.

It is of slight consequence, says The Journal of the American Medical Association, whether or not these rumors are entirely correct. They represent the current tendencies, which are undeniable by any one who has watched the recent decisions of American naval authorities in the face of adverse criticism couched in the usual phrases concerning personal liberty. The truth is, that "the relation of alcohol and fighting has been squarely met, and the fact admitted that they are not compatible." A recent editorial writer has expressed this by saying that a temperate army was something not conceived of in the old theories of war; but a drunkard is today as much out of place in an army as he would be on a battleship. As every great conflict, whether of church or state, of labor or commerce, has brought out some permanent good, however clouded it may temporarily have been by the major issues at take, so the horrible strife which the world is now experiencing may actually be developing a war against intemperance—a permanent advantage of no mean proportions.

No Danger of a Scarcity of Physicians.

That the marked reduction in the number of medical colleges during the last decade will result in a dearth of physicians in this country is a proposition which appears ridiculous to any one acquainted with the facts. The normal proportion of physicians to population in the leading nations of Europe is one to every 1,500 to 2,500 people; this country has one physician to every 600 to 650 people. The figures given for this country do not include the osteopaths, Eddyites and other so-called drugless practitioners which are scarcely found in other countries. The annual loss of physicians from deaths in this country is approximately 2,000, while the annual output of physicians from the medical colleges for several years exceeded five thousand. Even this year there were 3,594 or nearly twice as many physicians added to the profession as are lost from deaths. It is evident therefore, that if the annual number of graduates merely replaced the number of physicians removed by death it would still require many years before the supply of physicians would be reduced to the normal quantity needed. Just so long as the colleges continue to turn out more than the number removed by death, just so much longer

will it be before the normal proportion is reached. Again, it is apparent that the sixty better medical colleges with their present equipment, and with little if any added expense, could easily take care of all the students at present enrolled in the 101. It is quite clear, therefore, that the number of colleges might be reduced by another fifty per cent. and there would still be no danger of a doctor famine. Thus far we have considered more numbers. When we consider also the better trained physicians who are now being turned out in place of the product of former years, the danger of a lack of adequate medical service will be pushed still further away. The situation is summed up by The Journal of the American Medical Association as follows: A ridiculously large oversupply of exceedingly low-grade, commercial medical colleges with their enormous output of poorly educated doctors is rapidly giving way to a normal quantity—not reached yet—of high-standard educational institutions which are annually turning out a still comparatively large number of more thoroughly trained physicians. There is no question that the change is most beneficial to the public however one may look at it.

Journal of the Florida State Society.

Florida commenced on July 1st to publish a journal, known as The Journal of the Florida Medical Association, owned and published by the association. The statement is made in an editorial announcement that the main object in launching this publication is to stimulate the interest of the profession in the state in organized medicine in general, and the State Society in particular. The stimulus is needed; is self-evident from the fact that out of 1177 physicians practicing in the state, there are but 474 members of the State organization.

It required no small degree of courage for a State Society with such limited membership to enter upon the publication of a journal. We must commend the Society for the effort they are making in the right direction, and we feel that the result will be that the membership of the association will be doubled very shortly.

The copy of the journal before us reflects great credit upon the editor. Dr. Graham E. Henson of Jacksonville, was made Editor-in-Chief.

We welcome this journal to the group of state journals which are endeavoring to do so much for the advancement of medical science and the development of medical economies.

Ford Offers Detroit $3,000,000 Hospital.

In a letter to the directors of the Detroit General Hospital, now in course of construction, Henry Ford, automobile manufacturer, June 4, announced his willingness to take over the property on West Grand Boulevard, complete the work and provide Detroit with a creditable hospital. Mr. Ford is chairman of the board and his generous offer was unanimously accepted by all the members. His offer involves the expenditure of about $3,000,0000, and he will repay every person who has contributed every dollar he or she has given for the building of the hospital, which numbers about 100 and totals over $400,000. About $300,000 has been expended on the building, the service, building, laboratory and private patients' building and an operating room being now under construction. At least $250,000 will have to be expended before a patient can be received, but the work will be pushed rapidly upon the delivery of the deed of the property. Mr. Ford will assume all obligations such as employing particular individuals and everything of that nature. In returning the contributions and asking that he be relieved of employing any individual, Mr. Ford desires to be unhampered, and untrammeled in what he thinks best. He is working out a plan and wishes to be free to carry it out.

American Surgeons Go to Paris.

Dr. Joseph A. Blake, formerly of New York, who is now in charge of the American hospital corps attending wounded soldiers in Paris hospitals, has asked for volunteers among American surgeons to go to Paris and aid in the work. Seven young surgeons, in answer to this call, sailed from New York on Saturday, September 26th, on the Olympic. Six of the volunteers, who will work in the American Hospital in Paris during the continuance of the war, are Dr. J. P. Hoguet, Doctor Corry, Dr. Benjamin Jablons, and Dr. Lester Rogers, of New York; Dr. A. H. Dugdale, of Omaha, and Dr. Mercer Blanchard, of Columbus, Ga. The seventh volunteer, who will remain only six weeks, is Dr. Richard Derby. He will be accompanied by his wife, who was Miss Ethel Roosevelt, daughter of Theodore Roosevelt. Mrs. Hoguet also will accompany her husband.—(New York Medical Journal).

Brooklyn Physicians' Economic League.

The opening meeting of this organization was held in the Kings County Medical Society Building, on Friday evening, September 18th, under the presidency of Dr. Lester D. Volk. There are six organizations in the greater city of New York at present belonging to the Associated Physicians' Economic Leagues, and similar societies have been organized in many large cities throughout the country. The object of the league is to promote and protect the economic welfare of the medical profession. Dr. Charles Dumey, 194 Hooper Street, Brooklyn, is secretary of the Brooklyn leagnue.

Travel Study Club of American Physicians.

"The Travel Study Club of Amarican Physicians, which made a successful Study Tour of Europe last year, has completed the plans for its 1915 Study Tour to the A. M. A. meeting in San Francisco, Honolulu, Japan, The Philippines, China, with optional return via Siberia and Europe, or via Canada. This being the first party of American Physicians ever visiting the Far East and the new possessions of the United States, a most cordial welcome can be expected by authorities and members of the medical profession. The Travel Study Club would like to make its enterprise as representative as possible and asks all those interested to communicate with the Secretary, Dr. Richard Kovacs, 236 East 69th Street, New York."

America Has Charge of Big French Army Hospital.

Dr. Alex Carrel, of the Rockefeller Institute for Medical Research of New York, was about to leave for the United States, but at the outbreak of war he cancelled his departure, and is now in charge of a big hospital where the French wounded are treated.

New and Nonofficial Remedies.

Since publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies."

Hepco Flour:—A flour prepared from the Soya bean. It is claimed that clinical trial has shown that the small percentage of carbohydrates in Hepco Flour is in the main not sugar-producing, and that it therefore is a suitable food material in cases in which carbohydrates are contraindicated, as in diabetes, amylaceous dyspepsia, etc. Hepco Flour is also sold in the form of biscuits as Hepco Dodgers and a granulated "breakfast food" as Hepco Grits. Waukesha Health Products Company, Waukesha, Wis. (Jour. A. M. A., Sept. 26, 1914, p. 1113).

BOOK REVIEWS.

Collected papers by the Staff of St. Mary's Hospital Mayo Clinic, Rochester, Minn.

One has been taught to expect much and of high grade from the Rochester Clinic. The surgeon, not less the internest, and also the general practitioner will find much of interest and profit in this volume of 78 papers. The great number of these papers deal with subjects of general interest. Of vital importance are the facts presented in the paper of Dr. Chas. Mayo, "Constitutional diseases secondary to local infections." In this paper special emphasis is laid on infections about the teeth, the tonsils, and the nasal cavities, and the oral cavities, the mouth being the greatest atrim of infection for pathogenic organisms. Appendicitis may follow tonsilitis, also ulcertative endocarditis. The colon bacillus may invade the kidney by direct penetration to the kidneys. Doctor Mayo believes that the kidney may be invaded by way of the bladder, although quite rarely.

The problem of ridding the throats of diphtheria carriers of the diphtheria bacillus is briefly discussed by A. H. Sanford. Spraying the throat with a living culture of lactic acid bacilli resulted in the disappearance of the diphtheria bacilli in a few days. In five cases treated in Rochester, this result was obtained, after failure with nitrate of silver, antitoxin, phenal, and iodin.

The paper on peptic ulcer by Christopher Graham is classic. The paper by Carman on the roentgen examination of the stomach should be read not only by the expert roentgenologists but more especially by the roentgenologist of limited experience. He says: "Of the value of carefully made and judiciously interpreted fluoroscopic and plate examinations there can be no question that the combined fluoroscopic and skiagraphic findings may suffice to make a diagnosis, but says Carman "there is a greater number of cases in which the combined x-ray examinations will merely elicit suspicions or even only eccentric appearances. A large percentage of these are due to functional disturbances. A final diagnosis can rest only on all the evidences obtainable. The roentgenologist should be a clinician and follow his cases to the operating room, as only in the operating room can the value of the roentgen findings be determined."

Wilson's paper on gastric ulcer and cancer contains the startling but most important statement: that about 60 per cent of all cases of gastric ulcer operated on in the Mayo Clinic carry a long history, an average of 11.4 years; and 40 per cent carry a short history, of even 7 months. This evidence coming from such a source disposes of the idea that a patient can not have cancer of the stomach because he had stomach symptoms for several years.

The paper by Christopher Graham on cancer of the stomach is very instructive and specially creditable to the author as evidencing a most wholesome and receptive mental attitude are the words "This is the picture that gradually and sometimes rapidly develops from simply beginnings to beginnings we hope some day to clearly recognize." Here as elsewhere in this volume is sounded the key note of future progress in cancer treatment, to clearly recognize the early beginnings, because on this early diagnosis does successful treatment depend. "Cancer of the stomach", says Graham, "is a surgical affection and the services to the patient of the internest lies in his ability to make an early diagnosis but to none has been revealed a symptom, a group of symptoms, a method, a reaction, a chemical, or a bacteriological test upon which to base a reasonable diagnosis sufficiently early to give the patient the best results, and this applies to internest, surgeon, clinician, and pathologist.

In discussing cholecystitis without gall stones or jaundice, Doctor Wm. J. Mayo takes a rap at the operator that never makes a diagnosis of gall stones, but tells the patient that he has an infected gall bladder that needs draining. This makes the problem entirely too easy. "Our scientific conscience should not be satisfied by asserting on slender evidences that cholecystitis exists if a diagnosis of gall stones has been made and stones have not been found." Doctor Mayo states that cholecystectomy rather than cholecystostomy is to be preferred in probably 80 per cent of cases of cholecystitis. Doctor Chas. Mayo states that gastric dilation is a not uncommon post operative condition. The use of a stomach tube in abdominal cases not progressing favorably will often reveal a considerable degree of dilation.

Dr. McCarthy would not wait for the "penetration of the basement membrane before considering a neoplasm of a character demanding radical operation. The cells in chronic mastitis or cystadenoma are often just as irregular as in carcimona, and can not be distinguished from them." Hence to secure the best results the so-called benign fibro-adenomota adeno-fibromata and cystadenomata must be carefully removed; and more breasts diagnosed as chronic mastitis, and abnormal involution must be carefully removed. The paper by Plummer is very instructive.

The paper by Miss Henderson is a plea for simplicity in the administration of anesthetics (ether), without the addition of any other drugs, except for specific reasons. Miss Henderson is far from being convinced that nitrous oxide is even as safe as ether. The paper is authorative, and will be read with profit by every practitioner of medicine. Many papers, while excellent, and worthy of special recognition cannot be mentioned, owing to the lack of space. This work is simply an invaluable. one might say indispensable, addition to every medical library. L. W. LITTIG,

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Ambidexterity and Mental culture, by H. Macnaughton-Jones,M.D., M. Ch., Q. U. I., M. A. O. R. U. I. (Hon. Cau.), F. R. C. S. I. and Ed., Ex-University Professor, Queen's University, Ireland. Price, $0.75. Rebman Company, New York.

A brochure of one hundred pages written as stated by the author with the design "to condense in abstract the conclusions that may be drawn from the authoritative opinions of a number of leading physiologists, psychologists and teachers in this country and abroad," upon the relation of ambidexterity to mental culture.

The opening chapter is a short statement of some of the theories which have been advanced as explaining the greater use of the one hand, the right, over the other, the left. Of the influences working in this direction the author places "environment, circumstances, education and heredity" as the most important determining factors. While he places heredity as one of those factors we are led to believe that it is only for a comparatively few, quoting—Jackson, the author states that only 20 per cent are "bais" for right or left hand at birth and that 80 per cent are naturally ambidexterous at birth.

With the majority naturally ambidexterous at birth and accepting the statement of others that the brain in its anatomy and cellular structure is similar in the right and left hemispheres, then it will follow that the present condition of monodexterity has led to unequal development of the brain centres, particularly in speech and writing which are the avenues ef expression and represent the highest intellectual development. If this is so then by the education of bilateral centres, especially for speech and writing by teaching ambidexterity we should "naturally expect an increase in all those acquisitions which combine to endow the individual with a

higher type of mentalization" is the author's conclusion. The same conclusions are drawn as to the effects of ambidexterity upon character and self control which are undoubtedly obtained at least by ability to control muscular efforts.

The remainder of the booklet is devoted to the possibility of developing ambidexterity, to some of the dangers in attempts to force bi-lateral education and to some of the practical advantages of ambidexterity to every day life as well as to those who by disease or injury may have lost the power of speech or writing by a unilateral lesion. Some space is also given to describing some of the methods, such as the Montessori system, which are of use in teaching ambidexterity.

The book is written for the general public and while the author's conclusions are interesting their adoption would greatly change the present methods of education and therefore they should not be accepted until more conclusively proven. That while teaching of manual dexterity, as by the course in manual training, as well as making greater use of the cutaneous senses as is done in the Montessori system is recognized as of great value in the physical and mental developmnt of the individual, it does not necessarily follow that to educate both hands to do the same acts equally well, ambidexterity, would be of greater influence upon the mentality than under the prevailing method of having each hand do its own peculiar part. Nor is it established that to teach a child ambidexterity in writing would assure a bi-laterally placed word-forming centre. While we do recognize that under certain conditions the individual is fortunate to be able to use both hands equally well it is doubtful whether it wouud be wise to encumber the already over crowded, cumbersome and difficult process of learning by introducing such duplication as ambidexterity. Specialization is a law of nature and the activity of brain centres seems to be no exception to the rule.

A Treatise on Clinical Medicine. By William Hann Thompson, M. D., L. L. D. Formerly Professor of Practice of Medicine and Diseases of the Nervous System in the New York Academy of Medicine. Octavo Volume of 667 Pages. W. B. Saunders Company. 1914. Cloth $5.00. Half Morocco $6.50.

The first statement in the introductory chapter is somewhat surprising, and we are curious to find just how the author would explain it.

He says "Outside of hot climates the most common cause of disease and death is from catching cold." We have so long thought that the various inflammatory and degenerative processes were essentially due to some form of infection. The explanation is finally found in certain "laws" relating to the vasomotor system of nervous influencing the arterial system, causing hyperemias and finally lessening tissue resistance to the extent of favoring the growth of micro-organisms, the developing of pneumonia, catarrhal affections, etc. Under the same vasomotor influence remedial measures may be employed to affect nutritive changes in tissues in a curative way. The author has skillfully employed the older mechanical and vasomotor influences as a basis for the newer bacteriologic phase of modern pathology.

Chapter II brings to our attention the significance of some important symptoms, particularly pain, as one of the fundamental facts we are to take into consideration. Immediately following pain is emaciation. The author states that fully 75 per cent of all cases of emaciation are owing to the direct solvent action of bacterial toxins upon the body cells. The two facts of pain and emaciation are followed by gastro-intestinal disorders. Having then the three fundamental factors before us we now commence our investigation to discover the cause or causes which have

lead to such significant conditions ,for we may assume that some serious ailment exists: other symptoms of a guiding nature may be found which will direct us to a diagnosis, and by taking into account the tissue changes which have lead to the group of symptoms, find the logical remedies.

Part Second takes up the Infections. The author states the very interesting general proposition that "The term infectious should be applied to all diseases caused by the entrance of a micro-organism, but the infections by them occur in a variety of ways."

The word contagious is limited to diseases which are propagated by actual personal contact. These diseases are for convenience grouped in the first class. A second class includes diseases communicated indirectly through some intermediate agent. These classifications are of course convenient in the study of infectious diseases. It is impossible to follow in detail the individual diseases which come under those classes. Many pages are devoted to the clinical facts related to them.

Part Third: Diseases of Special Tissues or Organs. The blood and the blood vessels come first followed by the lymphatics. Then comes the Respiratory Tract, presenting the closely associated systems in a very helpful and logic manner. Diseases of the digestive organs, including the liver, spleen, and pancreas, come next. Followed by the diseases of the urinary apparatus. Chapters 11 and 12 are devoted to diseases of metabolism. An outline is furnished of this always interesting subject. Five chapters are given to the nervous system; a brief space for so important a subject, but it conforms to the general plan of work which is to present a practical treatise on clinical medicine.

A Text-Book of Medical Diagnosis. Second Edition. Thoroughly Revised. Octavo 1248 pages. 500 Illustrations. Some in Colors. By James M. Anders, M. D., Professor of the Theory and Practice of Medicine and Clinical Medicine, Medico-Chirugical College, Philadelphia, and L. Napolean Boston, M. D., Professor of Physical Diagnosis, Medico-Chirurgical College, Philadelphia. W. B. Saunders Company, 1914. Cloth $6.00 net. Morocco $7.50 net.

This magnificent book is a veritable storehouse of knowledge on medical diagnosis. It would be quite impossible to review a work of this kind in detail, and we shall therefore only undertake to point in a general way what can be found in it. Each system of organs is taken up in a logical order;—family history, personal history, physical examination. Taking the chest for instance; inspection of the chest, movements of the chest, types of respiration, palpation of chest, percussion, diagnostic significance of special signs in disease, ascultation, X-ray evidence, sputum microscopical study, bronchitis, asthma, broncho-pneumonia, lobar pneumonia, and many other things in relation to the lungs and pleura. The other systems are considered in the same way.

The second section of the book is devoted to Infectious Diseases. Included in this section are all the diseases that have an infectious origin. In the first section the diagnostic features relating to the diseased organ are found, and in the second section the special feature when involved in infectious processes. A third section is given to Parasitic Diseases. A fourth section to Constitutional Diseases, and a concluding section on Diseases of the Nervous System by T. H. Weisenburg.

The second edition contains some important additions which have been made to bring the work to the latest facts in medical diagnosis.

United States Public Health Service. The Administration of Yellow Fever Campaign. By W. C. Rucker, Assistant Surgeon, United States Public Health Service. Washington. Government Printing Office. 1914.

State Board Questions and Answers. By R. Max Goepp, M. D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Third Edition. Thoroughly revised. Octavo volume of 717 pages. Philadelphia and London; W. B. Saunders, 1913. Cloth, $4.00 net; Half Morocco, $5.50 net. W. B. Saunders Company, Philadelphia. London.

This work as its title indicates is a compilation of questions and answers carefully selected from various State Board examinations. The questions listed under the different subjects have been further supervised by competent authorities so that the spirit of advance in the branches of medicine represented has been fully maintained.

The completed work is a large volume of 717 pages, and the purpose of its publication has been admirably fulfilled in that it will be a distinct aid to Board of Examiners in formulating questions and should further be of considerable help to applicants preparing for licensure examination.

It seems evident that the demand justified the issuance of a third edition, yet the thought arises whether the need of a work of this nature will be so prominent in the future. The fact that such a work exists, may deter medical examiners from relying too closely on the same, and further it is doubtful whether the preparation of applicants by such means, which savors so much of quiz-compend knowledge is to be commended.

It should further be recognized that State Board examinations are undergoing marked changes in that practical examinations are being rapidly introduced, which must necessarily limit the needs of works of this kind.

The reviewer is pleased to acknowledge that this work easily constitutes the best and most complete work that has been published on this subject.—W. L. B.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume III. Number III. Octavo of 215 pages. 54 illustrations. W. B. Saunders Company. 1914. Published bi-monthly. Price per year. Paper $8.00. Cloth $12.00.

This number is a continuation of Dr. Murphy's clinical talks on surgical diagnosis. Dr. Murphy always says something worth remembering. He says that he devotes little time to operations in student clinics because this can be obtained from text-books, but the student must learn diagnosis by a system of personal investigation of actual patients. Dr. Murphy deplores the deficient diagnostic skill of so large a number of physicians and surgeons, and refers to the reports of the Committee investigating Bellevue and Allied Hospitals in New York City who show as we stated in a previous number of the journal, that only 47 per cent of the diagnoses were correct as shown by post-mortem examination. Dr. Murphy shows how serious a thing it is not to make a correct diagnosis of early cancer, and this applies with equal force to nearly all forms of disease. This number is full of inspiring words, helpful diagnosis, and masterful operating technic. The only thing we can criticize is the unnecessary testimonials of the value of some of Dr. Murphy's work, which we are willing to admit without witnesses.

Report of the Committee on Inquiry into the Departments of Health, Charities, and Bellevue and Allied Hospitals. Section VI. Physical Examinations and Employment of Dependents in City Homes. (Almshouses.)

The Summer Care of Infants.. By W. C. Rucker, Assistant Surgeon General, and C. C. Pierce, Surgeon United States Public Health Service. Public Health Reports. Washington. Government Printing Office. 1914.

Local Anesthesia, by Dr. Arthur Schlesinger, of Berlin, translated by Dr. H. S. Arnold. Rebman & Co., New York. Price $1.50.

A readable and practical book on local anesthesia, taking up the history, physical principles, describing in detail cocain and its substitutes. The chapter on nerve blocking is well written and amply illustrated. The descriptions given and technic illustrated are excellent.

SOCIETY NEWS AND NOTES.

The State University of Iowa, Iowa City College of Medicine, **Alumni Clinic**, Dec. 8 and 9, 1914.

Tuesday

8:30 A. M.—9:30 A. M.—Clinic in Eye, Ear, Nose and Throat for the General Practitioner.—Dr. L. W. Dean.

9:30 A. M.-10:00 P. M.—Address of Welcome by President T. H. Macbride, Introduced by Dean—Emeritus James R. Guthrie.

10:00 A. M.-1:00 P. M.—Clinic in Gynecology by Dr. Reuben Peterson, Professor of Obstetrics and Gynecology, University of Michigan, Ann Arbor, Mich.

1:00 P. M.-2:30 P. M.—Intermission for Luncheon.

2:30 P. M.-4:00 P. M.—Laboratory Inspection and Demonstration—Laboratory Building and Anatomical Building.

4:00 P. M.-5:30 P. M.—Clinic in Internal Medicine—Dr. C. P. Howard.

5:30 P. M.—Inspection of the New Wing.

Intermission for Dinner

8:00 P. M.—Smoker—Triangle Club.

Wednesday

8:00 A. M.-9:00 A. M.—Clinic in Dermatology—Dr. J. B. Kessler.

9:00 A. M.-10:00 A. M.—Clinic in Neurology—Dr. C. Van Epps.

From 7:30 to 9:00 Dr. Dean will conduct a clinic in Ophthalmology. Oto-Laryngology and Oral Surgery for specialists in these subjects. This clinic will be held in the operating room for head spcialties.

10:00 A. M.-1:00 P. M.—Clinic in Surgery—Dr. Dean D. Lewis, Professor of Surgery, Rush Medical College, Chicago, Ill.

1:00 P. M.-2:30 P. M.—Intermission for Luncheon.

2:30 P. M.-3:30 P. M.—Clinic in Pediatrics—Dr. C. S. Grant.

3:30 P. M.—Overflow Clinics—Inspection of University Buildings.

All Laboratories open for inspection.

Address of Welcome and all clinics will be held in the General Surgical Amphitheater, except Dr. Dean's Clinic Wednesday morning.

Additional announcements will appear on the Bulletin Board at 8:00 A. M. each morning. Be sure and look at the Bulletin Board when you enter the Hospital.

For the visiting ladies—Tea—Triangle Club—Tuesday, four to six o'clock. Luncheon—Jefferson Hotel—Wednesday, 1:00 P. M.

At the third annual meeting of Alienists and Neurologists of the U. S. held under the auspices of the Chicago Medical Society, for the purposes of discussing Mental Diseases in their various phases, July 17th, 1914.

The committee on The Causative Forces of Mental Deficiency reported the following resolutions, which were unanimously adopted:

We feel it unwise at this time to make any recommendations in regard to constructive legislation owing to the lack of proper evaluation of available data as to causes and sources of mental deficiency.

We do, however, recommend and urge regulation of mental deficients and the furthering of investigations as to the causes and sources.

The Committee on Syphilis as a Causative Factor in Insanity reported as follows:

Whereas, Syphilis is responsible for a large percentage of all insanity and mental deficiency.

Be It Resolved That:

First: Health Departments, (Municipal and State) should be equipped to make laboratory examinations for Venereal Diseases.

Second: All Hospitals for the Insane should be equipped to make laboratory examinations for Venereal Diseases.

Third: Hospitals and Dispensaries for the treatment of Venereal Diseases, should be provided.

Fourth: Physicians should be compelled by law to report cases of Venereal Diseases, as is now done in other contagious diseases.

Fifth: Applications for marriage should be required to furnish health certificates.

Sixth: Lectures and Bulletins should be offered freely to the Public regarding Venereal Diseases.

Seventh: Newspapers should be requested to use their best influence to educate the people concrning Venereal Diseases.

Eight: Sex Hygiene should be taught in the Public Schools, above grammar grades, to the sexes separately.

The committee on the Prevention of Insanity, reported the following resolutions; which were unanimously adopted:

Whereas, it is well recognized by alienists and neurologists the world over that certain major factors are the chief causes of physical conditions accompanied by mental derangement and deficency, and

Whereas, these major causes are largely, if not wholly, controlable and eradicable, and

Whereas, these major causes are alcholism, habit producing drugs, venereal diseases, work in unsanitary and unhygienic surroundings, and hereditary influence including the immigration of the physical and mental unfit.

Therefore, Be it Resolved, First: That we recommend to the proper state authorities, the absolute control of the sale of alcohol until such time as actual prohibition be enacted.

Second: That the sale of all habit inducing drugs be strictly regulated in all states of the union.

Third: That municipal or state control of venereal diseases be established, with proper treatment for indigent patients, to the end that the spread of syphilis and gonorrhea be prevented.

Fourth: That proper special hospitals for the care and treatment of alchoholism and drug addictions be established.

Fifth: That municipal, state and national inspection of labor conditions be regularly maintained and child labor abolished.

Sixth: That no known defective dangerous to himself and to others, should be permitted to have unrestricted liberty.

Seventh: That adequate teaching of the principals of heredity and sex life be initiated and fostered in the home with the view to its introduction into the curricula of schools—above the grammar grades, this instruction, to be given to the sexes separately.

Eighth: That the various states pass reasonable and universal marriage laws, that will be reciprocal, in preventing the marriage of the physical and mental unfit.

Ninth: That a Psychopathic Laboratory be connected with the Criminal Courts, Common Schools, Railroads, Transportation Companies and Public Service Utilities, responsible for the actual safety of the general

public should have their employees regularly examined as to their physical and mental fitness.

Tenth: That, inasmuch as state, county and city public health institutions should have as their superintendents, men of highest qualifications, who may devote their best efforts to their tasks, we recommend that all such positions be subject to civil service examinations.

Eleventh: That in addition to the above, we recommend a nationwide campaign of education conducted through the public press, university and medical schools, boards of health, state, county and city boards of education, womens' clubs and other proper educational mediums, upon the true significance of the development—physical, mental and moral—of the individuals and the race and finally, we recommend that a committee be appointed to promote the enactment of the above resolutions.

The committee on Alcoholism as a Causative Factor of Insanity reported the following resolutions, which were unamiously adopted:

Whereas, In the opinion of the meeting of Alienists and Neurologists of the United States in convention assembled, it has been definitely established that alcohol when taken into the system acts as a definite poison to the brain and other tissues; and

Whereas, The efforts of this poison are directly or indirectly responsible for a large proportion of the insane, epileptics, feeble-minded, and other forms of mental, moral and physical degeneracy; and

Whereas: The laws of many states make alcohol freely available for drinking purposes; and therefore cater to the physical, mental and moral degradation of the people; and

Whereas, Many hospitals for the Insane and other public institutions are now compelled to admit and care for a multitude of inebriates; and

Whereas, Many states have already established separate colonies for the treatment and re-education of such inebriates, with great benefit to the individuals and to the commonwealths.

Therefore Be it resolved that we, unqualifiedly, condemn the use of alcoholic beverages and recommend that the various state legislatures take steps to eliminate such use; and be it further

Resolved, That we recommend the general establishment by all states and territories of special colonies or hospitals for the care of inebriates; and

Resolved, That organized medicine should initiate and carry on a systematic persistent propaganda for the education of the public regarding the deleterious effects of alcohol; and

Be it Further Resolved, That the medical profession should take the lead in securing adequate legislation to the ends herein specified.

The proceedings will be published in one volume by the Illinois State Medical Journal, and will comprise from four to six hundred pages. This book will contain the papers read and their discussion, together with resolutions adopted. The subjects covered are, Acquired Insanity, Epilepsy, Mental Defectives, Alcoholism, Aberhalden Test, Syphilis, etc.

The proceedings will be published and ready for distribution by October or Nevember, 1914. As only a limited number is left unsubscribed for, those wishing the publication will please send their subscription at once, as there will not be a second edition. The price of book is $2.00. Send subscription to the Editor of the Illinois State Medical Journal, Dr. Clyde D. Pence, Chicago, Ill., 3338 Ogden Ave.

The **Ringgold County Society** met Wednesday, September 16th, 1914, at one o'clock p. m. sharp, in the M. E. church, Mount Ayr.

Dr. W. S. Conkling—Intestinal Injuries. Dr. Lewis Schooler—Medical and Surgical Progress. Dr. G. H. Sumner—Public Health.

Iowa Union Medical Society met in Cedar Rapids Country Club House, Tuesday, July 14. Dr. Ward Woodbridge, Central City—Conservation of Hands and Fingers. Dr. I. N. Crow, Marengo—Ligaments and Fascia of the Pelvis. Dr. C. S. Woods, Iowa City—Chemotherapy. Dr. Robert H. Herbst, Chicago—Surgery of Infections of the Genital Tract with Special Reference to Seminal Vesicle Disease. Dr. D. C. Brockman, Ottumwa —The Use of Benzol in the Treatment of Leukemia. Dr. J. P. Sedgwick, Minneapolis—Treatment of Spasmophilia. Dr. J. R. Guthrie, Dubuque—Pancreatitis.

The newly elected officers are:—Pres. Dr. H. J. Prentiss Iowa City, Vice-Pres. Dr. J. R. Gardner, Lisbon. Sec. Dr. C. S. Krause of Cedar Rapids, Treas. Dr. G. P. Carpenter, Cedar Rapids.

The next meeting will occur in December.

The fall meeting of the **Iowa and Illinois Central District Medical Association** met at Rock Island Club, Rock Island, Illinois, Thursday, October Twenty-second, Nineteen Hundred and Fourteen.

Program: 1. Intra Venous Medication in the Treatment of Ear, Nose, and Throat Affections (10 min.)—Dr. J. E. Asay, Rock Island. 2. The Roentgen Rays in Chest Diagnosis (10 min.)—Dr. Wm. Rendleman, Davenport. 3. Albuminuria without Nephritis (10 min.)—Dr. Larned vP. Allen, Davenport. 4. Joint Infections, and Fractures Involving or Near Joints.—Dr. John B. Murphy, Chicago. 5. Light Refreshments.

The Tenth Annual Meeting of the **Second District Medical Society** of Iowa, Davenport, Iowa, Tuesday, November 3, 1914, at 10:00 a. m. Headquarters and place of meeting at the Davenport Outing Club.

Experimental Streptococcus Infections, and their Clinical Bearing—Robert H. Babcock, Chicago. Toxemias of Pregnancy—J. O. Ristine, Maquoketa. Prophylaxis and Early Diagnosis in Tuberculosis as Factors in Public Health Work—A. J. Weaver, Muscatine. Rhachialgia Chronica—L. W. Littig, Davenport. Infections of the Hand—Charles J. Rowen, Iowa City. Obstetrical Adjuvants—H. R. Reynolds, Clinton. Prolapsus of the Uterus—Franklin H. Martin, Chicago. The Cerebro-spinal Fluid in Diagnosis—C. W. McClure, Iowa City. The Significance of Visceral Pain—Geo. E. Decker, Davenport.

On the eighth day of October 1914, at the Head Hotel, Jefferson, Iowa, was held the third meeting of the year for the **Greene County Medical Society.** A very good attendance. One new member voted in. The main event was a paper by Dr. Bierring of Des Moines, "Chronic Nephritis". This was surely enjoyed. A good discussion was had by the home Doctors and Drs. Patty and Kelly of Carroll. In December a business meeting and smoker will be held at which time will occur the election of officers.

Dr. Morrison has recently located at Grand Junction.

A meeting of the **Ringgold County Society** was held at Mt. Ayr, in the M. E. church on Wednesday, Oct. 21st, 1914. Dr. Granville N. Ryan of Des Moines addressed the Society on "Modern Treatment of Tuberculosis" and Dr. F. A. Will of Des Moines presented a paper on "Eye Strain and its Relation to Headache". This was a good meeting and was well attended.

Program for the October meeting **Appanoose County Society, Wed**nesday, Oectober 28, Drake Public Library 8:00 o'clock, P. M. Report

of a recent Diphtheria Epidemic—Dr. A. P. Stephenson. Autogenous Vaccines—Preparation, Administration, and Results—Dr. B. F. Sturdivant. Report on Some Recent Clinics I Attended—Dr. C. P. Bowen.

At the annual meeting of the Alumni Association of Rush Medical College, June 10, the following officers were elected; president, Dr. Arthur M. Corwin, Chicago; vice-presidents: Drs. Daniel H. Bowen, Waukon, Iowa; Charles J. Lewis, Chicago and John R. McDill Milwaukee; secretary, Dr. Charles A. Parker, Chicago; treasurer, Dr. Elmer E. Kenyon, Chicago, and neurologist, Dr. John J. Stoll, Chicago.

The **Audubon County Society** met Sept., 10, with Dr. R. F. Childs. Dr. F. Rosenbladt of Des Moines, a former member of this county Society, read a paper on Carcinoma of the large Intestine and Dr. G. A. May read one on Trachoma.

The **Jefferson Conuty Society** had as its guest on Sept., 23, Dr. Joseph Bolivar DeLee. The meeting was well attended and Dr. DeLee's talk was greatly appreciated.

Polk County Society met in regular session Sept., 29. Dr. T. B. Throckmorton showed a case of Brain Tumor and Dr. F. A. Ely presented a patient with Pellagra who had never been out of this state.

Dr. F. E. V. Shore read a paper on Submucous Resection of the Septum. Dr. Ross Huston had a paper on Chronic Prostatitis.

The **Botna Valley Association** at Atlantic, Ia., Aug., 28, held one of the best meetings in the history of this Society:

Program: 1—The Effects on the Urinary Tract of Disease of the Genital Organs—A. C. Stokes, Omaha, 2—Pericarditis—Dr. James Maynard, Adair, 3—Colle's Fracture—C. L. Campbell, Atlantic, 4—Treatment of Typhoid Fever—M. F. Stulz, Wiota, 5—Recent Methods in the Diagnosis and Treatment of Corneal Ulcers—James M. Patton, Omahah, 6—Contagious Diseases and Our Quarantine Laws—M. L. Turner, eDs Moines, 7—Eye Symptoms of Syphilis—F. W. Dean, Council Bluffs.

The **Iowa Clinical Surgical Society** held a very successful session at Ft. Dodge Aug., 29. Included in the meeting was a clinic by home talent at Mercy Hospital. The next meeting will be held in Davenport with Dr. Decker some time during the winter.

Mrs. Virginia Gay, of Vinton, Iowa, bequeathed $50,000.00 for the establishment of a hospital at Vinton. $20,000.00 to go into the building and equipment, and $30,000.00 for maintenance. The Hospital is to be known as the "Virginia Gay Hospital".

Audubon County Society on June 25th, met with Dr. May, the secretary of the county society, with all the doctors in the county except two, present. After dinner partaken by the society in a body, papers were read by Drs. James of Elkhorn, Riley of Exira, and Franklin of Audubon.

Lyon and Osceola Counties held a joint session at Sibley, on August 19th. During the afternoon, a scientific program was given and in the evening, an open meeting was held to which an invitation to the general public was extended, when Dr. Guilford H. Sumner, Secretary of the State Board of Health, delivered an address on "Public Health Matters, and Public Hygiene."

The annual meeting of the **Cass County Society** was held at Atlantic, July 15th, with the following program: Infection of the Liver in Children, Dr. A. J. Zook, Adair. Purpura Hemorrhagica, Dr. J. H. Maynard, Adair. The Cancer Question, Dr. B. B. Davis, Omaha. Reports on Cases of Tubal Pregnancy, Dr. Max Emmert, Atlantic.

The regular meeting of the **Poweshiek County Society**, for August, was held on the 4th of the month, at Montezuma. The program was: Varicose Veins, Dr. Mattie Crain, Deep River. Vaccine Therapy, Dr. E. B. Williams, Montezuma. Hernia, Dr. E. F. Talbott, Grinnell. General Discussion: The Business and Ethics of Medicine.

The **Keokuk County Society** met at the court house, Sigourney, Iowa, October 6.

Toxemias of Pregnancy, C. M. Hamilton, Thornburg.

Empyema, C. B. Taylor, What Cheer.

President's Address, M. F. Moore, Martinsburg.

Work of County Societies, J. F. Herrick, Ottumwa.

The September meeting of the **Appanoose County Society** was held at the Drake Free Public Library, Centerville, Wednesday evening, Sept. 30.

Program: Medical Societies—Their Necessity and Benefits, Dr. C. E. Lowrey. The Benefits and Necessity of a Hospital in a Community, Dr. E. E. Bamford. Of What Should a Hospital Consist, Dr. C. S. James.

MARRIAGES.

Dr. Frederick H. Roost of Sioux City to Miss Helen Kearney at Jackson, Neb., August 29, 1914.

Dr. Harry H. Ennis of Baxter to Miss Rederus of Milwaukee, Wis., at Farley, Ia., Sept., 3d, 1914.

Dr. Lawrence J. Kaasa to Miss Julia Olivia Thompson, both of Lake Mills, Sept., 2d, 1914.

Dr. A. H. Rosberg of Dennison to Miss Alexandria Zorn of Chula Vista, California, at Omaha, Neb., Sept., 7, 1914.

CHANGES OF LOCATION.

Dr. O. T. Jacobs, formerly of Calumet, has removed to Larrabee.

Dr. A. J. Bryant, formerly of Blairstown has located at Chelsea.

Dr. N. O. Dalager, formerly of Lake Mills, has located at Fertile. Dr. Dalager is succeeded at Lake Mills by Dr. J. H. Nichols of Kansas City, Mo.

Dr. C. I. Eberle, formerly of Webster City, Ia., lately from North Yakima, Wash., has located at Blairstown.

Dr. C. S. Trimble, formerly of Buckley, Ia., has removed to Emporia, Kansas. Dr. Trimble has taken special work in diseases of the eye, ear, nose and throat and will limit his practice to these specialties.

A Warning.—A subscriber writes that a certain Donald McCormick is soliciting subscriptions to a bureau called the "American Bureau (or Institute) of Medical Research," at Indianapolis, Ind. The purpose of this bureau, he states, is to receive all medical journals of the world and to make reprints of each individual article which are kept in stock and lent to subscribers to the bureau. The cost of membership is $5 a year. A physician in Iowa who addressed the bureau had his inquiry returned with the announcement that no such institute existed, and that the addressee was not at the place named.

On Tuesday, October 20, 1914 the **Benton County Society** met at Van Horne with Dr. T. L. Thompson. The features of the meeting were the very able and interesting talk of Dr. McClure of Iowa City on certain phases of blood examination and the luncheon served the physicians in attendance by Dr. Thompson.

The **Black Hawk County Society** held its October meeting on the 15th of the month, having as its guest Dr. J. F. Percy of Galesburg, Ill., who gave one of his interesting and instructive talks.

The **Benton County Society** met in Waverly October 13th, 1914. Besides papers by Dr. R. A. Weston of Des Moines and several of the other physicians, Dr. Weston held a clinic at the hospital which was greatly appreciated by those in attendance.

The **Dallas-Guthrie Society** had on October 15th, 1914 at Panora for its annual meeting this program.

Program: Anatomy of the Uterus and Appendages, Dr. J. N. Van Meter.

Salpingitis, Dr. C. O. Sones.

Non-Surgical Treatment of Diseases of Women, Dr. W. E. Scott.

Report of Cases.

Election of Officers.

On Sept. 29th, 1914 the **Dubuque County Society** had for its program.

Modern Orthopedic Surgery and its Relations to Other Branches of Medicine, Dr. R. O. Meisenbach, Buffalo, N. Y.

A Comparison of European and American Hospital Methods, Dr. Joseph H. Schrup, Dubuque.

Minor Surgical Gynecology, Dr. C. E. Ruth, Des Moines.

Practical Use of the Lane Plates with Skiagraphs, Dr. H. T. Walker, Dubuque.

A banquet was served at 7:30 p. m. after which toasts were given by Dr. C. E. Ruth, Subject, The Maxwell-Ruth treatment of fractures of the Hip Joint; Father Stewart of Dubuque College, The Relationship between the Physician and Clergy; Dr. R. O. Meisenbach, Remarks relative to the Attitude the press toward the Medical Profession; Louis Murphy Collector of Internal Revenue who replied to Dr. Meisenbach remarks and Rev. John Dysart—Hon. W. H. Torbert and Dr. H. M. Bradley, who each made a splendid talk.

At the **Jackson County Society** held at the Decker House, Maquoketa October 20th, 1914, Dr. L. B. Carson read a paper on the need of a county hospital which was discussed by Drs. Henry Albert, and C. S. Woods, Iowa City and Bowen and Johnson of Jackson County. After the discussion it was the unanimous opinion that concerted action should be taken to bring this matter before the public at once. Other papers were, Fundamentals of Public Health Education, Dr. C. S. Woods, Iowa City.

The Cancer Problem with lantern slide illustrations, Dr. Henry Albert, Iowa City.

The **Marshall County Society** met in the courthouse at Marshalltown, Wednesday, October 21st, with thirty physicians in attendance.

Program: Nephritis, illustrated with charts, Dr. A. Sachs, Omaha, Nebraska.

Minor Surgical Gynecology, Dr. C. E. Ruth, Des Moines.

Eye Changes; their Relation to General Diagnosis, Dr. F. P. Lierle, Marshalltown.

ORGANIZATION NOTES.

Have You Forgotten The Date of Our Next Meeting?

—Bulletin, Lake County (Ind.) Medical Society, May, 1913.

GOOD RESOLUTIONS

1—To defend the fraternity.
2—To prescribe no patent medicines.
3—To charge fees just to self and patron.
4—To regard my neighbor kindly, not jealously.
5—To work for the Northumberland County Medical Society.
6—To devote one hour daily to reading medicine.
7—To support insurance companies paying $5 for examinations.
8—To attend every meeting of the society.
9—To take part in the discussions.
10—To prepare a paper or address when requested.
11—To get a new member.
12—To remember that you are a doctor.—Notes, Northumberland Co. (Pa.) Medical Society, March 1914.

Membership in the County Society.

What your annual dues secures for you:
1—Membership in the County Medical Society.
2—Membership in the State Medical Society.
3—Membership in the American Medical Association.
4—Eligibility to Fellowship in the A. M. A.
5—Opportunity and benefits of the work of all of these.
6—The pennsylvania Medical Journal.
7—Protection from unjust malpractice suits.
8—Aid from Medical Relief Fund, if you should become needy.
9—Aid to your family in case of your death, if in need.
10—The promotion of social and fraternal interests.
11—The opportunity to work with your conferers for professional advancement.
12—Satisfaction or joy in having fraternal partnership in the greatest medical organization of the world.

Who would ask more for the amount of dues paid? Dr. Outsider get in and get in quick.—Call and Roster, Franklin County (Pa.) Medical Society, March, 1914.

What your Annual Dues secure for you in Iowa.

1—Membership in the County Medical Society.
2—Membership in the State Medical Society.
3—Membership in the American Medical Association.
4—Elligibility to Fellowship in the American Medical Association.
5—Opportunity and Benefits of the work of all of these.
6—The Journal of the Iowa State Medical Society.
7—Medical Legal Protection from unjust malpractice suits.
8—Promotion of Social and Fraternal interests.
9—Opportunity to work with your conferers for professional advancement.
10—Satisfaction and joy in having fraternal partnership in the greatest medical organization of the world. Dr. Member, why not invite your outside neighbors to come in and share our Joys and Sorrows.

Dues for 1915 are due January 1, 1915. Members go into suspension Feb., 1, 1915. Journal is not optional.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

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ADDRESS IN MEDICINE

THE PHYSICIAN'S RELATION TO PUBLIC HEALTH WITH A REPORT ON A DIPHTHERIA EPIDEMIC

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We believe that the most important factor in medicine today is the general practitioner. Sometimes we wonder if he realizes the importance of his work. The wise physician is a public educator. Not alone does this apply to health matters but also to sociological problems because the two are intimately associated. It is high time for the ordinary medical man to be alive to the modern trend of affairs. No man comes so close to the great heart of humanity as the physician and no man has greater responsibility for the general welfare of the community. Popular education along medical lines is very rapidly advancing and it is bound ultimately to dispel the fear, superstition and misconception in which the inefficient physician has so long found his protection and in which the people have so long found disaster. No practitioner is so secure in his reputation that he can afford to neglect modern methods, or fail to be a constant student of the advance made by the medical sciences and the effect on economic and social conditions of his profession. Public sentiment is rapidly changing and laws are being made all over the nation that need the direction of experienced, well balanced medical minds. No man in Iowa is practicing medicine in so remote and obscure a place, that he may treat the question of public health with indifference without exposing his own locality, and possibly the whole State, to very great danger.

The people have a right to the benefits of preventive medicine and competent medical service. The most important function of the state is the conservation of her citizens, and the greatest factor in accomplishing this is scientific medicine. Just how the state is going about it to accomplish this remains to be seen, but the physician must be wide awake to his duties in the matter. To our mind the school offers the best, if not the only, opportunity of reaching everybody. Hygiene like physiology has been taught in our schools for years but it has been merely an academic subject without practical force. Personal hygiene has been taught in some places during the last few years in such a way as to impress the children with the value of personal cleanliness. The nature of infectious disease, and the deleterious effects of alcohol, coffee, tea and tobacco should be taught vigorously. Medical inspection of schools when general throughout the state will be one of the most important agencies in the preservation and prolongation of human life. Provided, of course, that the work is done efficiently by properly trained men whose tenure of office does not depend on political preference, popular whims, or local social and business influences.

The specific objects of medical inspection, as given by Dr. Cornell, are:—

1. "The detection and correction of physical defects."

2. "The detection and exclusion of cases of parasitic and contagious disease."

3. "The maintenance of good hygienic conditions in the schools."

4. "The diagnosis and treatment of cases of mental deficiency."

5. "The correlation of medicine and pedagogy in order to produce the maximum of efficiency in the school system consistent with the preservation of health."

This is a broad subject upon which we can but touch. The detection and exclusion of parasitic and contagious disease introduces the problem of the "carrier", one of the most important confronting the profession today. Bacteria carriers have been observed for diphtheria, typhoid fever, Asiatic cholera, epidemic meningitis, gonorrhea, and also for the micro-organisms producing syphilis, malaria and infantile paralysis. A "carrier" has been defined as "a healthy person who harbors, for an indefinite period, an organism, which, when the opportunity arises, will produce the disease of which the organism is known to be the etiological factor." The person may have suffered from the disease or he may never have been ill. The last few years have seen an immense amount of work to determine how to control and cure these carriers. The rural population is quite as freely exposed to the danger as the city. In a comparatively short time we have seen two boys and a girl all under ten years of age and living in the country suffering with gonorrhoeal oph-

thalmia. Each of two of these children lost an eye. The percentage of typhoid has been shown to be greater in rural districts with their careless attention to hygienic conditions than in the thickly populated city. Possibly as much might be said of some other diseases mentioned.

To illustrate what may be done in the smaller places when the profession stand together as they did in our little home city of Vinton, we wish to make a somewhat incomplete report on the control of an epidemic of diphtheria during the fall and early winter of 1912. Between October 25th and November 21st thirty-two (32) cases of diphtheria were reported and quarantined. These were well defined cases verified by the culture test but so readily controlled by antitoxin that the citizens doubted the reality of danger in spite of the fact that one child died. About the 18th of November it was discovered that a pupil had been attending school for several days while actually ill with diphtheria. This, together with the fact that so many "positive" reports were received on cultures taken by the physicians in our community, caused our local Board of Health to order a culture from both the throat and nose of each pupil attending the public school. All "carriers" were excluded from the schools, and so far as possible isolated after the method used in the city of Chicago, until free from diphtheria germs as shown by the regular culture test made by our State Board of Health Bacteriological Laboratory. The following table shows the results of our tests:—

Date. 1912—	Number of cultures taken	Positive Cultures.	Negative Cultures.	Per Cent Positive.	No Growth.
Nov. 19.	45	9	34	20	2
Nov. 20.	102	42	60	41	
Nov. 21.	173	81	92	46	
Nov. 22.	106	40	66	38	
Nov. 25.	14	6	8	44	
Nov. 29.	29	16	13	55	
Nov. 30.	216	64	152	30	
Dec. 4.	18	6	11	37	1
Dec. 5.	201	85	114	42	2
Dec. 9.	76	20	51	26	5
Dec. 12.	23	5	17	22	1
Dec. 13.	21	6	15	29	
Dec. 14.	16	5	11	31	
Dec. 18.	17	3	14	18	
Dec. 19.	13	3	10	23	
Dec. 20.	26	2	24	8	
Total	1096	393	692	36	11

There were 714 different individuals including teachers, pupils and assistants from whom cultures were taken and 1096 cultures

taken. On November 23rd our Superintendent and four teachers were found carriers. It was impossible to get substitute teachers and the attendance was so small that against our best judgement we were compelled to close the schools until December 9th. On or about December 20th a virulence test was made for us by Dr. Henry Albert and the remaining "carriers", some ten in number, were found to have non-virulent bacilli and were accordingly admitted to school. These carriers were all instructed to consult their physicians as to treatment. The ruling of the Board of Health met with such vigorous opposition that little attention was given to treatment of the pupils until it was made plain that no one should re-enter school who was a carrier. Then the people took notice and followed the suggestions of their physicians. It will be noted that after this the percentage of positive cultures decreased so that in ten days it amounted to but eight percent which were found non-virulent. Four carriers developed characteristic membranous diphtheria and a fifth case was an inmate of a carrier's home. We are unable to say how many of the 32 reported cases of diphtheria had been carriers. It would be interesting to know this. During the above mentioned period we saw an unusually large number of patients presenting a severe catarrhal inflammation of the tonsils and naso-pharynx with cervical adenitis which would clear up in from five to seven days. Usually a physician would not see these patients until ill for several days and before a report of a positive culture could be had from the laboratory they would be well. So very often were such cases found that one might reasonably conclude that, if not all, at least the majority of these diphtheria carriers had at some time had an active diphtheria so mild in some cases as not to attract the attention of the one infected. A critical study of the signs and symptoms of diphtheria clearly shows that clinical signs alone are insufficient for diagnosis. Of course the one who claims to be able to make the diagnosis by smell alone and always to find a membrane present will not agree to this. While it is hard to give up deeply rooted convictions we must all bow down to bacteriology as the source of enlightened diagnosis. We are convinced that school inspection with the early isolation and treatment of "carriers" and the clinical cases developing, controlled and limited what would have been a severe epidemic in Vinton.

At times criticisms are made of the laboratory. There are cases that we all will find disappointing but this fact does not justify wholesale condemnation of laboratory methods. When the faulty technic of many practitioners in taking cultures is considered, together with real conditions found in the patients examined, it is surprising that such exact results are had. During the past two years the State Board of Health Bacteriological Laboratory has made over 1200 cultures for us and we can testify to a remarkable degree of accuracy and efficiency. Repeatedly we have had nega-

tive cultures from simply swabbing the tonsils, when in the same patient (my own son was one of these patients) and at the same sitting we would get a positive culture from a silver probe passed into the depths of one of the tonsillar crypts. It is very probable that cultures taken from the tonsillar crypts would show constantly a much larger percentage of carriers present among healthy people than heretofore recognized. We have also found cultures from the throat negative when those from the nose would be positive which proves the necessity of always requiring cultures from both nose and throat.

How long may these bacilli persist? Osler says that following an attack of diphtheria the bacilli may persist in the throat and nose for even fifteen months. Three years ago we had a five year old boy who promptly recovered from diphtheria after 5000 units of antitoxin, but carried virulent Klebs-Loeffler bacilli for ten weeks and became free only after the use of a broth culture of the staphylococcus pyogenes aureus prepared for us by Dr. Albert. Since we are not able to determine how long these germs may be carried, negative cultures should be required for release from quarantine. However, this method is not popular with the country practitioner for the simple reason of its unpopularity with the laity who can see no use of expensive professional attendance upon well people.

What percentage of well people are diphtheria carriers at times when there is no epidemic? Various estimates have been made, results we believe depending largely upon the technic used in making cultures. Between last October 23rd and December 16th 1913 with no clinical diphtheria in the town seventy-six cultures were taken in two Vinton offices. Seven of these cultures were positive but of these seven but three were of the so called virulent type of diphtheria bacilli and but one of these cultures from a citizen Vinton. Six months have passed and no clinical diphtheria has developed from these cases so far as known.

It is hoped that some satisfactory and efficient method of freeing carriers will soon be discovered. At present this problem has not been satisfactorily solved. However, when we recall "that diphtheria is transmitted usually by almost direct exchange of the flora of the nose and mouth" much of the fear of the danger is dispelled because it is quite possible to avoid the contagion. We general practitioners must educate the people, especially parents and school teachers, so that they may instruct the children as to personal hygiene. May the day soon come when all shall realize that disease is not so much a visitation of Divine Providence as an indication of human negligence.

ADDRESS IN LARYNGOLOGY

THE SIGNIFICANCE OF LARYNGEAL MANIFESTATIONS DURING THE COURSE OF PULMONARY TUBERCULOSIS BASED UPON A STUDY OF 650 CASES

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When in the course of pulmonary tuberculosis symptoms referable to the throat arise, their significance becomes at once a matter of vital importance. Whether these manifestations occur early or late, whether they are mild or severe in character, whether they are the sole source of complaint by the patient or are casually mentioned by him, or are accidently observed by the physician, they demand the closest scrutiny.

In the earliest stages of pulmonary tuberculosis the diagnosis may be confirmed or doubtful according to the laryngeal manifestations. Later the treatment and what is of even greater importance the prognosis, may depend upon the nature of the throat disturbance. During the course of a tuberculous case, when the pulmonary lesion is apparently quiescent and the patient has lost his fever, when his cough has diminished and his general condition is apparently improving, there suddenly arises more or less discomfort referred to the larynx with slight hoarseness. Coincidently with these local symptoms the fever returns, the cough becomes more marked, anorexia again manifests itself and the general well being of the patient is again disturbed. Always on the look out for new foci of infection or for complications the practitioner immediately questions whether these throat symptoms indicate a new focus of infection, a serious complication, or whether they are of sufficient moment to attribute the increase in general symptoms to them for as Bonney so well puts it, "it should be born in mind that the laryngeal involvement may in some cases be quite devoid of clinical significance and remain a feature entirely subordinate to the pulmonary affection." On the other hand as Bonney further states, "the laryngeal disturbance assumes a prominence sufficient to over shadow all other considerations."

Many of the local symptoms are not only of non tuberculous origin and therefore have no influence upon the recurrence of constitutional symptoms but being of tuberculous character they may still, as frequently occurs, have developed coincidently with these manifestations but can not be held responsible for them. In such an event it becomes of great importance to clearly and distinctly recognize their significance in order that one may look elsewhere for the cause of the unfavorable progress of the case. Moreover the

frequency with which laryngeal tuberculosis complicates all cases of the pulmonary disease and the unquestioned gravity attending this complication make it incumbent upon us to study every local disturbance and to carefully investigate its import.

Even before pulmonary symptoms are apparent hoarseness may occur not necessarily as the result of laryngeal tuberculosis but due to a paresis from pressure of tuberculous lymph glands on the vagus.[1] This paresis is extremely suggestive in that it is usually more marked upon one side than the other and may be considered as indicating the side of the lungs to which especial attention should be directed. Krieg[2] found 91.6 per cent of unilateral paresis upon the same side as the lung involvement.

The greatest variation is found in the statements relative to the frequency of laryngeal tuberculosis. Different observers, studying their cases from different view points and meeting different classes of cases, have given us figures from which it is difficult to draw anything but general conclusions.

Schroeder[3] has estimated that 20 per cent of all chronic pulmonary tuberculous cases have laryngeal complications, while 30 per cent represented the proportion as estimated by accurate observers more than twenty years ago. Today even the same observer gives us different figures at different times. For example, St. Clair Thomson[4] 1913, states that post mortem findings show laryngeal involvement in 50 per cent of those who die from tuberculosis and gives 72 per cent as the frequency of its occurrence in third stage cases. In his most recent article[5] published April 11th, 1914 and based upon a study of 693 sanatorium cases he finds 25.6 per cent as representing the frequency of this complication. It would therefore appear that statistics are of little definite value so far as an estimation of the frequency of this complication is concerned unless cases are carefully segregated according to stages, social environment and whether or not treatment for the pulmonary disease has been instituted. The most one can say is that laryngeal tuberculosis is a very frequent complication of chronic pumonary tuberculosis occurring in approximately one-third of all cases, its frequency being "often entirely revealed by autopsy alone" but "corresponding with the age of the pulmonary process increasing as the end approaches." Cornet[6]. Even the latter statement must be modified if one can believe the result of careful observation.

In a series of 338 cases taken at random and in which the lungs and throat were both involved I attempted to determine the relative proportion of laryngeal involvement in each stage of lung disease, and while my data do not give the frequency of the laryngeal complication in all cases of pulmonary tuberculosis they are nevertheless suggestive.

In studying these cases it has been found necessary to adopt a classification indicating the stage of the lung affection as well as

the stage of the throat complication. All those who have studied the literature realize the difficulty that confronts one in an attempt to classify tuberculosis according to stages. Not only is the literature confusing but practical experience shows that it is almost impossible to establish a satisfactory classification. Nevertheless there is a certain very definite similarity in the classifications that from time to time have been adopted and modified. It is not difficult, especially for the sake of convenience, to make the classification adopted by the International Tuberculosis Committee coincide with that of Cornet. The Tuberculosis Committee quoted by Thomson[7] recognizes three groups. Cornet[8] recognizes three stages. Let us compare these two classifications.

Group 1. (International Tuberculosis Committee) Disease of slight severity limited to small areas of one lobe on either side, and which, in cases of infection of both apices, does not extend beyond the spine of scapula or the clavicle, or in case of affection of the apex of one lung does not extend below the second rib in front.

First stage (Cornet) phthisis incipiens, embracing period during which symptoms are only slightly marked, nutrition is good and the disease is limited to infiltration of the apex.

Group II (International Tuberculosis Committee) Disease of slight severity more extensive than group one but affecting at most the whole of one lobe; or severe disease extending at most to one-half of one lobe.[2]

The second period, (Cornet) comprises the process of softening during which all the symptoms increase in intensity.

Group III (International Tuberculosis Committee) All cases of greater severity than group two, and all those with considerable cavity.

The third period, (Cornet) is the stage of cavities of advanced consumption with hectic fever.

It is recognized that it is impossible to draw the dividing line definitely in all cases, the patient often presenting a pulmonary lesion which represents several stages or which are border line cases. In such cases the stage recognized is the one represented by the most advanced lesion.

In classifying the laryngeal complication a simple classification may be adopted as follows:

First stage, that of anemia or hyperemia with slight infiltration.

Second stage, that of extensive infiltration.

Third stage, that of ulceration and necrosis.

The patient is said to present that stage of disease which represents the most advanced process, that is to say if there exists, as is usually the case, extensive infiltration with ulceration the patient is said to be in the third stage.

In 338 cases (see Table A) in which the lungs and larynx were involved there were 83 first stage lung cases. Of these 25 or 30.12

per cent were in the first stage of throat trouble, 38 or 45.3 per cent were in the second stage and 20 or 24.09 per cent were in the third stage. There were 170 cases in the second stage of lung trouble. Of these 31 or 18.23 per cent were in the first stage of throat trouble, 79 or 46.47 per cent were in the second stage, 60 or 35.29 per cent were in the third stage. There were 85 third stage lung cases. Of these 7 or 8.23 per cent were in the first stage of throat trouble, 32 or 37.64 per cent were in the second stage and 46 or 54.11 per cent were in the third stage.

TABLE A

LUNGS		THROAT					
Stage	No.	Stage	No.	Stage	No.	Stage	No.
1st.	83	1st.	25 (30.12%)	2nd.	38 (45.3%)	3rd.	20 (24.09%)
2nd.	170	1st.	31 (18.23%)	2nd.	79 (46.47%)	3rd.	60 (35.29%)
3rd.	85	1st.	7 (8.23%)	2nd.	32 (37.64%)	3rd.	46 (54.11%)
	338						

Of the first and second stage lung cases the largest number were in the second stage of throat trouble showing that the early stage of throat trouble was frequently over-looked. These figures are further born out by the following estimate of two separate series of cases.

TABLE B

	Stage	No.	Stage	No.	Stage	No.
No. in 1st. series 299	1st.	54 (18.06%)	2nd.	122 (40.8%)	3rd.	123 (41 %)
No. in 2nd. series 355	1st.	70 (19.71%)	2nd.	160 (45.07%)	3rd.	125 (35.21%)
654	1st.	124 (18.96%)	2nd.	282 (43.11%)	3rd.	248 (37.9%)

In both of these series the attempt was made to determine the relative percentage of each stage of throat trouble in a given number of cases irrespective of the stage of the pulmonary involvement.

In the first series of 299 cases it was found that 18.06 per cent were in the first stage of laryngeal tuberculosis, 40.8 per cent were in the second stage and 41 per cent in the third stage.

In the second series of 355 cases 19.71 per cent were in the first stage, 45.07 per cent in the second stage and 35.31 per cent were in the third stage of laryngeal tuberculosis.

The average of these 654 cases shows that 18.96 per cent were in the first stage, 43.11 per cent were in the second stage and 37.9 per cent were in the third stage of the laryngeal complication.

Even in the third stage lung cases a large percentage, namely 37.64 per cent of the above 338 cases, Table A, were still in the second stage of throat trouble although the largest number, 54.11 per cent, as was to be expected, were in the third stage.

The time at which laryngeal tuberculosis first manifests itself in the course of a general or pulmonary process usually has been considered to be late in the disease. Minor[19] says, "usually the earliest tuberculous laryngeal manifestations are coincident not

with very incipient pulmonary lesions but with moderately advanced ones.'' Other authors express themselves in similar terms. This view in my opinion has been the cause of much confusion even resulting in failure to carefully investigate throat symptoms that develop early in the disease. I have always been under the impression that this was an erroneous conclusion brought about largely by the carelessness with which local symptoms unless of considerable severity were regarded by the average practitioner. In this connection it was interesting to study the length of time the lungs were involved even though the stage was not recognized. This seemed to have but little bearing upon the stage of the throat manifestation as indicated by the following table C.

TABLE C

No. of cases.	Stage of throat lesion	Average duration of lung lesion	Average duration of throat les.	Average difference in time between development of lung and throat lesion.
54	1st. (18.06 %)	26 mo's.	9.73 mo's.	16.27 mo's.
122	2nd. (40.13 %)	29.75 mo's.	12.09 mo's.	17.66 mo's.
123	3rd. (41.13 %)	27.67 mo's.	10.31 mo's.	17.36 mo's.
299				17.9 mo's.

In fifty-four first stage throat cases the lungs had been involved 26 months while the throat had been involved 9.73 months showing that when the throat symptoms first developed the lungs had been involved 16.27 months.

In 122 second stage throat cases the lungs had been involved 29.75 months, the throat 12.09 months making the difference between the time of the throat and the lung development 17.66 months.

In 123 third stage cases the lungs had been involved 27.67 months, the throat 10.31 months so that the throat symptoms developed when the lungs had been involved 17.36 months.

From this it would appear that in a total of 299 cases in which the stage of the throat was given but in which the stages of the lung affection were not differentiated (Table C) 17.9 months represented the average length of time between the developmnt of the lung lesion and that of the throat.

TABLE D

No. of cases.	Stage of lung lesion	Average Duration of lung lesion	Average Duration of throat les.	Average difference in time between development of lung and throat lesion.
85	1st. (25 %)	22.21 mo's.	11.91 mo's.	10.3 mo's.
171	2nd. (50.29 %)	31.77 mo's.	14.9 mo's.	16.87 mo's.
84	3rd. (24.7 %)	33.28 mo's.	14.8 mo's.	18.48 mo's.
340				15.21 mo's.

In 340 cases in which the stage of the lung was given but in which the stages of the throat affection were not differentiated (Table D) the average difference in time between the development of the lung and the throat lesion was 15.21 months. The difference in the average of these two series studied from somewhat different angles, is very slight.

The conclusion is forced upon us that approximately 17 months elapse after the beginning of pulmonary tuberculosis before the laryngeal complication manifests itself, which can not be considered the period at which the lung disease is in an advanced stage, for we found in table D that the average duration of the lung involvement in 85 first stage cases was 22.21 months and that as early as 10.3 months the throat began to be involved.

While the value of general averages of this sort may be open to criticism, nevertheless it must be considered of some importance as well as of marked significance. This view is exemplified by the statement of Cornet which reads, "The determination of the average entire length of a course of pulmonary phthisis is important not only from a clinical but also from a politico-economical standpoint. This average may be obtained by finding the sum of the number of years of illness in a definite number of consumptives, and then dividing the former figure (the average duration) by the latter (the number of individuals.)"

The essential point in this and in other tuberculous conditions is the early diagnosis.

So many non-tuberculous manifestations occur in the progress of pulmonary tuberculosis no matter what stage the disease is in that one must be constantly on his guard for fear he may interpret wrongly certain suggestive symptoms and thus fall into the error of a gloomy outlook.

Lamberson[9] states that in 244 lung cases 45 per cent had tuberculous laryngitis while 21 per cent suffered from non-tuberculous laryngitis.

Mays[10] says that hoarseness may be functional due to a paralysis of a vocal cord accompanied by pulmonary tuberculosis. This was recognized as early as 1869 by Morrell Mackenzie[11] in his treatise on the "Use of the Laryngoscope in Diseases of the Throat." In speaking of adductor paralysis he says that "debility and hysteria are undoubtedly the most frequent cause of this disorder" but "it is common in the second and third stages of phthisis and this is an important fact as the aphonia of phthisis is almost invariably attributed to the structural changes which are too frequently encountered in that disease."

Dryness, burning sensations, discomfort or actual pain in swallowing, hoarseness and even slight though intermittent attacks of dyspnea are manifestations of chronic pharyngitis or chronic laryngitis. The nature of these inflammatory conditions is of catarrhal type, the laryngeal involvement frequently assuming that condition known as laryngitis sicca in which the secretions accumulate and lie over the laryngeal surfaces giving rise to difficult voice or interference with the breathing. The pain complained of by these individuals differs from that of the pain in tuberculous ulceration in that it is manifested when the attempt is made to swallow at times

other than during the taking of food and is most marked at the beginning of a meal being relieved during the ingestion of food. This is fairly characteristic of non-tuberculous pharyngeal and laryngeal affections although a beginning tuberculous laryngitis may in its early stage give similar sensations.

Knowing how frequently affections of the nose especially obstructive in character are conducive to the development of pharyngeal and laryngeal symptoms one should in all cases carefully explore these cavities.

Briggs[12] has observed that three-fourths of the pulmonary paients have some nasal stenosis due either to septal or turbinate deformities, and while one can not conclude from this statement that there exists a direct relationship between tuberculosis and such conditions in the nose the fact remains that in all individuals, tuberculous or not, nasal affections are extremely common and in tuberculous cases especially should call for active treatment.

The importance of recognizing the persistent laryngitis whether acute or chronic but resisting all forms of treatment can not be too emphatically insisted upon. Briggs speaks of it as being dependent upon the tubercular dyscrasia.

Lockard[13] believes there is no reason for assuming it to be tuberculous or even pre-tuberculous. Nevertheless it must be admitted that some underlying reason exists for the persistence, despite all forms of treatment, of such a condition, and furthermore it is incumbent upon us to recognize that when such a persistent laryngeal affection exists in the course of pulmonary tuberculosis the possibility of the development of the localized infection is not remote.

Pain has always been looked upon as the most suggestive of all symptoms pointing to laryngeal tuberculosis. We must not forget that this manifestation may be greatly exaggerated on the part of the patient influenced by personal equation and may in fact be due not to a tuberculous lesion but to a pharyngitis or laryngitis sicca as stated above. On the other hand even advanced cases of laryngeal tuberculosis with ulceration may complain of little or no dysphagia and I have observed, greatly to my surprise, numerous instances in which the epiglottis itself was involved in a tuberculous ulcerative process and the patient suffer almost no discomfort.

The first tuberculous changes in the larynx often produce not the slightest difficulty, as was well stated by Schroeder[14], so that subjective symptoms can not be in any sense relied upon, on the contrary they become a source of confusion and are liable to lead one into serious error. It therefore becomes necessary to rely upon a close and intelligent scrutiny of the laryngoscopic picture. Perhaps the most suggestive of all objective signs is the asymmetry of the local manifestations. Schroeder states that unilateral redness of one vocal band, every slightest localized swelling of the mucous

membrane in the larynx of a patient with lung tuberculous is to be viewed as a tuberculous process and so handled.

Ulcerative processes are among the most characteristic of tuberculous disease of the larynx, nevertheless as pointed out by E. Fraenkel and quoted by Cornet[15] non specific ulcerations may occur in the larynx of the tuberculous either alone or simultaneously with specific erosions. When we remember the superficial character of a tuberculous ulcer it is not to be wondered that the error is frequently made of calling a non-tuberculous erosion tuberculous, for as stated by Adami and McCrae[16] "a tubercle caseating and discharging will leave an ulcer, or, there may be shallow erosions whose relation to the tuberculous infection is not at once evident." This difficult feature has been most carefully studied by Ziba [17] who quotes many authors in addition to Fraenkel. He agrees with J. Mackenzie that these erosions exist as the result of streptococcic or other infection and that tuberculous ulcerations resulting therefrom do so by the additional or the superadded tuberculous infection.

It would therefore appear that the diagnosis can not always be made from the laryngeal picture alone until pathological changes have developed to a degree beyond an early stage. Nevertheless the appearance of certain suggestive if not pathognomonic conditions will be sufficient in the majority of instances to warrant a diagnosis of laryngeal tuberculosis. These manifestations may be briefly staged as follows: first, localized or asymmetrical and persistent redness; second, localized or asymmetrical swelling; third, superficial erosions surrounded by an irregular rugous swelling at what Casselberry[18] calls the "vocal angle," namely the internal aspect of the arytenoid at the junction of the posterior extremity of the vocal band.

Later the diagnosis becomes comparatively simple by recognizing the characteristic turban shaped epiglottis or pear shaped arytenoids or irregular nodular infiltration in the posterior commissure. When the stage of ulceration has arrived the local appearance is still more characteristic. These ulcerations are non inflammatory in character rarely if ever surrounded by a red zone. Their edges are beveled, they are superficial and irregular in outline, frequently coalescing one with the other, covered by a grayish or white liquid secretion which when washed away leaves a pale base dotted with small grayish tubercles or pin point, pale pink granulations.

Has the time of development of laryngeal tuberculosis any bearing upon the prognosis and treatment? In other words may these be influenced differently when the throat lesion manifests itself in the first, second or third stage of pulmonary disease? No matter when the throat complication arises it must be looked upon as of considerable importance. "The occurrence of any complication is of unfavorable moment but all of a tuberculous nature bespeak a lessened resistance and are accordingly of grave prognos-

tic significance,'' Brown[20], and ''of the complications tuberculosis of the larynx or intestines is of especial evil import,'' Cornet[21]. Nevertheless we must assume that the earlier the lesion is recognized the better is the prognosis.

As to whether an early lung lesion is unfavorably influenced by the development of the throat complication or whether the prognosis of the laryngeal affection is influenced by the condition of the lungs resolves itself largely into a consideration of individual cases. Generally speaking one may agree that the 'laryngeal lesion is only a local expression of pulmonary involvement and the improvement of local conditions depends very greatly upon the improvement in the lungs, ''Birkett[22], or as Schroeder puts it only as the lungs improve and heal is there prospect of the laryngeal process healing. Still there are so many exceptions to this general statement that it would be unwise to be governed by it.

In the treatment of laryngeal tuberculosis the stage of the lung lesion is of the greatest importance. In active rapidly progressing second and third stage pulmonary tuberculosis one should approach the larynx with the greatest conservatism and still there are times when heroic measures are of much benefit even in advanced cases. This benefit may not tend toward a cure but the comfort and relief that are frequently obtained by active surgical measures warrant their employment even in extreme cases. The dysphagia that makes the last days of a consumptive the most distressing of his illness frequently can be abolished by the amputation of an epiglottis or the removal of ulcerating infiltrations and excrescences. Conservatism even in moderately active cases is often the best plan of treatment. When in the early stage of pulmonary tuberculosis there exist high temperature, aggravating cough and marked anorexia, the best interests of the patient are conserved by adopting a plan of local treatment which will be the least distrubing to his comfort and peace of mind. Under these circumstances to compel the patient to make frequent visits to the Doctor's office is productive of more harm to his general condition than can be counterbalanced by any good to the local lesion and it is only when relief of local symptoms are demanded that more active measures should be carried out.

When however the general condition of the patient does not offer a positive contraindication it matters not in what stage the throat affection finds itself, the most active and even heroic measures are demanded. No one will deny that the time for a ''laissez faire'' plan of action has passed so far as laryngeal tuberculosis is concerned despite the fact that many cures have been reported as the result of vocal rest and a line of general treatment.

Active local measures should not be condemned because of themselves but rather because of the manner in which they are carried out and because of the lack of judgment in the selection of suitable cases. Here as elsewhere individualization is eminently

necessary and the physician's judgement becomes the greatest proof of his ability.

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TONSILS AND ADENOIDS, IN THEIR RELATION TO GENERAL SYSTEMIC INFECTIONS*

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It was with considerable hesitancy that I accepted the invitation of your chairman to present a paper on "Tonsils and Adenoids in their relation to General Systemic Infections".

I am not in accord with those of authority who believe the tonsils are atavistic, having no function whatever, serving only as a portal of entrance for germs which produce all forms of systemic infections, and should be removed whenever visible, whether they are diseased or not.

On the other hand, I do not wish to be classed with those who believe that the tonsils have a very important function to perform, are incapable of causing any systemic infection, and should never be eradicated.

According to Hartz[1], the four tonsils are a part of the auxilliary apparatus of the lymphatic system. He further says that there is "a regression of the structure of the lymphatic system with age, and may be regarded as physiological. In early childhood the lymphatics are in full development. The network, or reticulum,

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constituting the filtration apparatus, is most complete at the early age of one year; the number of lymph glands in the child exceed that of the adult."

Goodale, Wright[2] and others, consider the function of the tonsil to be the same as that of the cervical lymph nodes, and believe they act as barriers against infection. It would seem then, that the tonsils of young children are of more value than they are to the adult, and this fact has been responsible for the occasional objection to removing the faucial tonsils of young children, unless they are unusually diseased.

While there may be little doubt but that the normal tonsils have some function which is still imperfectly understood, until investigation determines this point more definitely, we must rely entirely upon clinical findings.

Up to the present time, there are no well founded contraindications to removing the faucial tonsils and adenoids if they are diseased, no matter what the age of the patient may be.

There is, on the other hand, an abundance of convincing clinical evidence that tonsillectomy, in selected cases, has brought about brilliant results, in the treatment of a wide variety of both local and remote diseases.

This fact does not excuse the indiscriminate sacrificing of tonsils and adenoids. There are many individuals who have quite large faucial tonsils, and a fair amount of adenoid tissue in the vault of the pharynx, without any inconvenience from them, and these tonsils and adenoids should be left alone.

Tonsillectomy is not a simple surgical procedure, devoid of danger, to be recommended on the least provocation, without some consideration as to whether the tonsils are diseased or not. It is a subject for serious consideration, not as the cause of all obscure systemic infection, but as one of the possibilities to be considered, when we are endeavoring to establish a rational etiology in obscure diseased conditions, which are likely to be dependent upon some one or more foci of infection.

The tonsil is no more likely to be the starting point of these diseased processes, than the appendix, ovaries, prostate, urethra, and other common portals of entrance for systemic infections, but they are to be considered as one of the foremost.

When the tonsils are extensively diseased, there are generally local conditions which make it apparent, to even the patient or parents, that they should be removed, but not infrequently we see a patient with some ailment remote from the tonsillar region, who has never had any local throat symptoms, but upon careful inspection of the tonsillar region, under good reflected light, and with the aid of pillar retractor and probe, we find a small buried tonsil, the enlarged crypts of which exude an abundance of a white semi solid material which has been found to contain a variety of bac-

teria. This tonsil should be eradicated on suspicion. It is these tonsils, buried in adhesions, that are more often responsible for the systemic infections, instead of the large, free tonsils that are visible to the unaided eye.

The use of good reflected light, and a probe to retreat the anterior pillar, will very often bring to our view a diseased tonsil which on simple inspection would have escaped detection.

The close association of the rheumatic affections and tonsillitis has long been recognized, and some writers have insisted upon the diseased tonsil as the starting point in many cases of rheumatic infection. Occasional cases of complete recovery from sub-acute and chronic forms of arthritis were reported, following the removal of the tonsils. The theory did not, however, become generally popular until quite recently. This tardy recognition of the diseased tonsil as a very important factor in the etiology of rheumatic, and other obscure systemic infection, was, in all probability, due to the faulty removing the tonsil. Since the advent of the improved operative technic, the clinical results following the complete removal of the gland, have been uniformly good, and this fact has stimulated numerous clinical and laboratory workers to renewed investigations regarding the relation of the tonsils to systemic infections.

Among the most interesting of these investigations are those of David J. David[3] who examined the tonsils removed from forty-five patients. "The excised tonsils were at once placed in a sterile receptacle and taken to the laboratory. The tonsil was incised with a hot, sterile knife, thus exposing the crypts, and from these, smears and cultures were made. In almost every case a pure growth, or a nearly pure growth of streptococcus pyogenes was obtained from the crypt." "The virulence of twenty-five strains of streptococci isolated from the tonsils were tested by intravenous injections into rabbits. Acute arthritis developed in nearly every instance, followed, usually, by death in from a few days to three or four weeks."

There is nothing in his report that would indicate that any of the patients, from which the tonsils had been removed, had had any symptoms of a streptococcus infection, but we may assume from these investigations, that the streptococcus pyogenes generally inhabit diseased tonsils, and under normal conditions "the germs are either destroyed or modified so that they may live at peace with their host (Wright)", but under more favorable circumstances, such as an acute tonsillitis, or the inception of one of the acute contagious diseases, with the attendant lowered bodily resistance, one can imagine that these heretofore innocent germs might take on renewed vigor, multiply, and escape into the general circulation, causing an acute arthritis, and occasionally an endocarditis.

So, too, it is not unreasonable to suppose that a tonsil exposed to repeated attacks of acute inflammation, may eventually cease to

be an effectual barrier against systemic infections, and permit the constant, slow absorption of their abnormal contents, or their products, and produce as a result, chronic systemic infections, such as arthritis, neuritis, and other affections commonly attributed to auto-infection.

Regarding acute rheumatism, we know that at least one-third of the cases begin with a sore throat, and that it is not an unusual occurrence for a chronic arthritis to recover, following the removal of diseased tonsils. This evidence is not conclusive, but it is of sufficient importance to warrant a careful consideration of the tonsils as one of the portals of infection in this class of cases, including the complications and sequela, such as endocarditis, arthritis, etc.

It is hardly necessary to recount here, the well known facts which have established the important relationship between acute middle ear infections in children, nor is it necessary to more than mention the influence of diseased tonsils and adenoids in keeping up the discharge of a sub-acute or chronic otorrhea, not only in children, but in adults as well.

Cervical adenitis, of the non-tubercular type, is invariably the result of infection from the tonsils, and probably a large proportion of the tubercular glands are also infected in the same way. In the cervical adenitis accompanying scarlet fever, diseased tonsils are nearly always present in the severe cases. In three instances, where enlarged glands have persisted after convalescence from scarlet fever, one of them for nearly two years, all promptly subsided after the removal of tonsils and adenoids. In fourteen other cases of cervical adenitis observed by the writer, which were not tubercular, eleven recovered completely, without any other treatment than removal of diseased tonsils. Two of the remaining three evenutally recovered, one of them after the excision of one or two suppurative glands, and the other is still under observation, having only recently been operated. The remaining case, a woman of 36 years of age, had a chronic discharge from her right ear, of some three years standing, which was believed to be responsible for the enlarged glands on both sides of her neck. An examination of her throat revealed two fair sized tonsils, which were honeycombed with enlarged follicles and pockets, containing an abundance of cheesy deposits. A tonsillectomy was done, and as a result the enlarged glands on the left side of the neck entirely disappeared, and on the right side they became much smaller, the ear ceased discharging and she was much improved for a period of six months, at the end of which time the ear began to discharge again, and the glands on the right side of the neck began to enlarge. The patient complained of a constant feeling of soreness about the right side of the throat. Upon examination of the throat the left side appeared normal, the right side quite red, and upon retraction of the anterior pillar, it was discovered that there was an adhesion, apparently be-

tween the anterior and posterior pillar, at the upper and lower extremity of which exuded a thick white discharge, containing some masses of a semi solid material. Under ether anesthesia the pillars were separated, and with the forceps I was enabled to expose the remaining base of the right tonsil, which resembled a sieve, the holes being filled with thick white semi solid material. The removal of this remaining diseased portion of the faucial tonsil caused a cessation of the discharge from the ear, and the enlarged cervical glands entirely disappeared in four or five weeks, and have not reappeared after a period of 18 months.

This case illustrates very well the close association between the diseased tonsil and cervical adenitis, and also demonstrates the necessity of thorough removal of the tonsils in order to obtain favorable results.

My personal experience in the removal of diseased tonsils in tubercular glands of the neck is limited to two cases, neither one of which made any decided improvement after the removal of the tonsils, in fact the operation seems to have been a detriment rather than a benefit. There are, however, recorded cases of cervical glands which have been improved by the removal of diseased tonsils, and it would appear that if the tonsils are a part of the infected glands, they should be removed with the rest.

Young children have repeated attacks of what is called acute catarrhal fever, ephemeral fever, acute indigestion, or acute catarrhal cold, extensively prevalent in the early winter and changeable spring months, in which the individual has a rise of temperature, vomiting, pains in the back, and sometimes a loud, barking cough. On account of the prominence of the gastro-intestinal symptoms, these cases are frequently attributed to disturbances of the stomach and bowel, until an attack occurs in which the local throat symptoms predominate, and attention is called to diseased tonsils, the removal of which prevents a recurrence of the trouble.

One of the most convincing examples of the harmful influence of the toxins absorbed from abnormal tonsils is observed in diseased conditions of the eye in young children. Recurrent kerato conjunctivitis manifested by swelling of the palpebral conjunctiva, excoriation of the lid margins, small superficial ulcers of the cornea, accompanied by a profuse muco-purulent discharge and intolerance of light, are invariably due to diseased tonsils. Gastro-intestinal disturbances, or both. This condition generally occurs in children from two to six years of age, and they continue to have these acute attacks of sore eyes with increasing frequency, until the cause is finally removed, and in at least one-half of the cases, diseased tonsils will be found responsible for the recurrence. In five instances under my own observation, in which there were no other possible causes for the peristence of the eye trouble, but enlarged tonsils and adenoids, a complete and permanent cure resulted from surgical attention to the tonsillar ring.

A persistent marginal blepharitis, recurrent iritis, occuring in children, should always direct attention to the nasopharynx. I have observed two cases of recurrent iritis in children, which have not recurred since the removal of their tonsils and adenoids.

In one of these instances, an arthritis of the knee joint preceded each attack of iritis, neither having recurred since the ablation of her tonsils two years ago.

Tonsillectomy has been recommended as a cure for canker sore mouth, and I have observed two cases where the tonsils had been removed on the recommendation of an internist. Both individuals continue to be bothered with their canker sores, as before.

Tonsillectomy has been frequently recommended as a prophylactic against acute contagious disease, but this advice is not well chosen, because there is no proof to show that children who have their tonsils removed, gain any protection against the acute contagious diseases, and it is claimed by some writers that, children with large tonsils who contract diphtheria, run a milder course than those who have had the tonsils removed.

This fact is not quoted as a contra-indication to removing diseased tonsils, the removal of which would result in improving the child's health to such an extent that they would not be nearly so apt to contract any contagious disease, and in the event that they did, they would be better prepared to withstand the disease. But the fear of contagious diseases, does not warrant the removal of tonsils which are not interfering with the child's normal health.

In the recent outbreak of infantile paralysis, the disease has not been any more prevalent in individuals with enlarged tonsils.

The tonsil has been suggested as the avenue of entrance for the infection in cases of appendicitis, nephritis, meningitis, and a host of other diseases, and undoubtedly, in rare instances, the diseased tonsil may be responsible, in an indirect way, but the relationship is, as yet, too uncertain to be entitled to any prominent place as an etiologic factor in these diseases.

It has not seemed necessary to go extensively into all of the diseases which have been mentioned, as resulting from tonsil infection, but to point out a few of the common conditions, in which relationship has been established beyond the realm of conjecture.

There can no longer be any doubt but what the tonsil in a diseased state, is one of the avenues of entrance of the specific germ of rheumatism in a large proportion of cases. It is also responsible for occasional cases of other forms of systemic infection to such an extent, that it is always worthy of consideration as a possible entrance point for the toxic material.

The small, submerged tonsil is more often responsible for systemic infections than the large free tonsil. The size of the tonsil is no indication for its removal ,unless it is large enough to be a mechanical obstruction, interfering with normal respiration, or is in a

diseased condition sufficient to cause either local or general infection.

When there exists an obscure general infection, with no discoverable cause than the possibility of a tonsil, which on its surface appears normal,it is justifiable to remove this tonsil on suspicion, as it occasionally happens that these glands are found to have diseased cavities in them, after removal, that were not apparent before the operation.

When it is finally decided that the tonsil should be removed, it should be entirely eradicated by any one of the methods of tonsillectomy now in vogue. Tonsillotomy has no place in modern surgery, and there is no more excuse for a partial removal of the tonsil, than there is for a partial removal of the appendix.

I feel quite capable to speak with some authority on this subject, because of my slowness in adopting the radical method of dealing with tonsils in all cases, and, as a result I have had to reoperate a great many cases that I had operated in former years, and in nearly every instance, the tonsils were much more diseased at time of the second operation, than they were before the first operation. Partial removal of the tonsil may bring about some fairly good immediate results, but we leave a portion in a condition which predisposes it to become worse than it was before the incomplete operation. Any tonsil that needs operating on, requires total ablation.

SINUS INFECTIONS*

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The study of the accessory sinuses is limited practically to the life of the middle-aged practitioner of today—at least the treatment of them. Ziem a little more than twenty-five years since published a series of articles on antrum disease which opened up the study of this region. Morrell Mackenzie did not mention them in his work published in 1882, and Hyrtl in the same year stated that the sphenoidal sinus was outside of the field of surgical interference. Shaeffer in 1885 performed the first recorded operation on the sphenoidal sinus in the living subject. Voltolini in his work on Rhinology in 1888 made no mention of empyema of the accessory sinuses. However, he was the first, I believe, to direct attention to the illumination of them. In a note he recited the history of a case which he diagnosed as sarcoma of the antrum, which later, however, proved to be an empyema.

In considering the subject as we are doing this evening, the absorption and distribution of the infection and toxins is the prominent consideration. We find that absorption takes place as a rule

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through the veins and lymphatics. From the venous plexus and cavernous tissue of the nose the blood returns, first, through the connection with the facial vein; second, through the ephenopalatine; and third, through the ethmoidal veins. Zukerkandl has demonstrated a vein which accompanies the anterior ethmoidal artery through the cribriform plate into the anterior central fossa and empties either into the venous plexus of the olfactory tract or into one of the large veins upon the orbital surface of the frontal lobes. The foramen cecum in young children also admits of a communication between the upper nasal fossa and the cranial cavity. Injections into the sub-arachnoid space may be traced into the irregular plexus of lymph vessesls in the nasal mucosa; also in the perineural sheaths containing the olfactory nerve bundles. They drain backwards and empty into the two trunks, one the prevertebral and the other the hyoid nodes in the retro-pharynx. There is also an anterior lymph drainage from the superficial nasal lymphatics along the facial vessels to the sub-maxillary nodes.

The anatomical development, irregularities, etc., cannot practically be treated in a short essay such as this. Harke in 400 autopsies found pus in some of the nasal sinuses 134 times—a percentage of 35.5; while Frankel found it in 40 per cent of the bodies he examined. These figures agree substantially with the observations of others. The percentage clinically, however, is much lower; according to Chiari and Lichtwitz, about 2 per cent of the patients in their clinic. The difficulty of detection in many cases renders the diagnosis very uncertain. When the drainage is comparatively free, no retention symptoms may be present, and the patient dismisses the discussion of it with the remark that for years he has suffered with catarrh. Unfortunately some of the most dangerous cases are among those not easy of detection. Nasal obstruction is always abnormal, and nasal catarrh, as the term is generally used, always indicates a diseased process. It can mean anything from the slightest temporary discharge to a most grave condition.

Hajek and Lack look upon sinus trouble as an extension from the nasal mucosa in practically all cases. No doubt, however, extension from neighboring structures and circulatory deposits in rare cases may give rise to a sinus empyema. A long list of bacteria have been found as the active agents in the suppuration. Headache, usually periodic, is one of the commonest complaints. Its location does not necessarily point to the individual sinus. In the absence of other causes, however, the nasal examination should never be omitted. When due to sinus trouble, its severity is usually variable, depending on the drainage. However, the headache may be present as a result of absorption from a chronically inflamed lining of the sinus in which drainage is quite free.

Pus in the sinus may produce symptoms in the immediate neighborhood or may affect the general health. (Wishart).

Rhese in the preface of an elaborate article on the ethmoid and sphenoid sinuses states that he observed during a three months residence in the neighborhood of large health resorts, where many patients came thinking they were subjects of chest disease or nervous disorders, that a chance examination of the rhinologist showed that their trouble was nothing other than a sphenoidal or ethmoidal empyema. This prompted him to select the subject for a thesis. The value of the x-ray in detection of these conditions is treated very thoroughly in his work. He found that to demonstrate these conditions pictures taken in the anterior-posterior meridian and in an oblique direction were the best, the plate for the latter picture being placed against the nose and the malar bone in a plane varying from 20 to 30 degrees from the frontal plane, while the rays were directed from about two or three centimeters above the external occipital protuberance toward the involved area.

Even in the practice of the most experienced men an occasional mistake in the reading of the plates is made. The effort in recent times to make exact diagnosis in a large number of indefinite conditions has lead to searching examinations for the etiologic factors. Along with the study of the ductless glands and errors in metabolism, sinuses have been found to reveal the cause of many troubles. Critical studies of muscle, joint and heart complications have been made by Billings, and some of his co-workers. He is today looking to the sinus, apparently, as often as to the tonsils, as a possible source of systemic infection.

We find great differences among the sufferers from sinus disease. The individual infection, resistance of the patient and anatomical peculiarities play a part. How differently nasal obstruction alone affects different individuals. We see some with noses occluded making but slight complaint, while others with apparently the same degree of obstruction would have us believe that they must have immediate relief or life is to them of little value. While writing this a young man under thirty years of age called on me with a large amount of infected adenoid tissue involving his pharynx. He was under size, possessed of but litttle vigor, and had the appearance of one not receiving his share of whatever one should enjoy in the way of health. It is my belief that the removal of this adenoid twenty-five years since would have permitted him to develop better both in physique and resistance.

Among the symptoms arising in the immediate neighborhood of the sinuses, the symptom so common in children suffering with adenoids, aprosexia, is not to be overlooked.

I recall the case of a fellow practitioner about twelve years since. He called on me after spending a couple of weeks in the hospital, where he was treated for malaria. The first day following the snaring of the anterior end of the middle terminal, which permitted the drainage of a frontal sinus, he told me that he did not

think it possible to experience such a change in the mental action following such a drainage. It had not occurred to him that he had sinus trouble, because of the absence of local symptoms. He said he could read and appreciate what he was reading in a way that he was absolutely unable to do the few preceding weeks.

Pressure and absorption of toxins many times damage the eye, leading to a contraction of the field of vision and a reduction in vision. Tinnitis aurium has recently been found in many instances to be the effect of toxins absorbed from this area. A recent extensive work by Onidi has pointed out clearly the relationship existing between the lachrymal duct and the neighboring sinuses, a little surgical work in the middle fossa in certain cases removing the pressure on the duct and leading to complete relief.

By surface extension Rhese and others have demonstrated how it is possible to have involvement of the trachea and bronchi in a way because of its chronicity leads the examiner to suspect tuberculosis; or when the secretion from the infected post-nasal space is swallowed, stomach and intestinal trouble results. Chronic anemia may have its cause in an empyema in one of the sinuses. It would seem that it may either sapremic or septicemic.

When we reflect that the toxic condition may cause a tinnitis or an optic nerve impairment, it is but a step further to the general circulatory infection which may lead to metastases in different organs. Influenza, with the symptoms developing a chronic type, frequently has its cause in sinus disease. Patients often call upon us suffering with various neuroses, neuralgias, hystero-neurasthenia, migraine, headache, dizziness and involvement of the ductless glands. All of these complaints indicate the necessity of investigating carefully the nasal sinuses.

In considering chronic involvements of these cavaties, tuberculosis and syphilis—especially the latter—should be constantly in the mind of the rhinologist. Many times it is impossible to decide whether a sinus infection was primarily due to a chance infection from the nose in a subject suffering from one of the later conditions, or whether the constitutional trouble prepared the way for a secondary infection. Recently I have had some of these cases to deal with. Given a patient suffering with an empyema who gives a positive Wassermann, it goes without saying that the constitutional condition should be treated along with the local one. It has been my lot to see a number of extensive luetic nasal troubles which healed, and the subjects later developed tabes dorsalis, myelitis, or some other nervous lesion.

In concluding, I cannot refrain from referring to the two types of operators. The radical operator many times secures brilliant results, but occasionally he has some sad experiences; the more conservative operator preferring, when he has drainage, to work step by step and secure the same results without the greater hazard.

Some of the external operations, such as the Killian and Ogsten-Luc, which were frequently practiced, as pointed out by Dan Mackenzie, are by the more experienced men being employed now only in cases where special indications are presented. Osteomyelitis has developed so often in either the acute or chronic form, with such a high mortality, that many prefer to secure drainage with the slighter operation rather than incur the risk attending the more radical one.

I regret that the time at my disposal is so limited that the recital of cases demonstrating many of the complications indicated above in general statements is not practicable.

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Discussion on the Papers of Drs. Gratiot and Pearson.

Robert Levy, Denver: This subject of infection from local conditions and its effect upon the general system, is one that is always timely, especially so before a body of general men; and I wish to congratulate the Society and the gentlemen who have read these papers upon choosing a subject that can't help but interest every one of us. No matter how frequently the effect of local conditions upon the general system is reiterated, it is always new, and always of interest, because it is brought home to us practically every day of our lives. The thought that the general practitioner and the specialist have nothing in common is done away with here, for we know how intimately they are brought together in these particular subjects. The specialist depends as frequently upon the result of the investigation of the internist in the determination of what had best be done in many of these cases—perhaps more so, in fact—as the general man depends upon the specialist.

The subject of the tonsils as discussed by Dr. Gratiot was handled in a most masterly manner, to my way of thinking, in such a short time. There is frequently a question in the mind of not only the practitioner, but also the patient, as to whether a tonsil ought to be removed or not. It is frequently a matter for very grave consideration, because, though the operation may be looked upon as a comparatively trivial one, nevertheless we know that it is not a simple procedure—not so much in the matter of performing the operation as in the possibility of serious consequences from the operation itself. It is certainly an operation that should require very careful consideration before it is undertaken, in every case. And so I was very glad to hear the doctor say that merely because the tonsil showed some anatomical abnormality, or because it was somewhat larger than it should be normally, it should not be removed. One cannot impress this too firmly upon the minds of some practitioners. And in so far as the removal of tonsils for prophylaxis is concerned, that too should be emphasized, as the reader of the paper did emphasize it.

The determination of whether or not a tonsil should be removed does not depend alone upon the local examination. What do we mean by a diseased tonsil? One can't determine this by a simple examination of the tonsils, nor by an examination such as the doctor suggests, i.e., retracting the pillars and squeezing the crypts and making a bacteriological examination of the secretion that comes from these crypts.

An examination of this kind does not always tell us that the tonsil

is a diseased one. The most innocent-looking tonsils are the ones that frequently do the most harm. But we can determine, no matter what the appearance of the tonsil is, by certain systemic conditions and symptoms that are today pretty well known, that the tonsils are responsible. For instance, I think there is no better indication of the ill effects produced through tonsils, than the enlargement of certain glands in the neck. The glands at the angle of the jaw—the cervical glands particularly, not necessarily the post-cervical glands are the ones that we know drain the tonsils, and the infection may take place through the tonsils, involve these glands, and from there the rest of the system, without involving the tonsil in any pathological process at all.

That has been shown in numerous instances, and at this moment I recall the experiments of George Wood of Philadelphia in connection with tuberculous infections of the tonsils, in which he showed, in making experiments upon pigs tubercle bacilli passing directly through the tonsils without having involved the tonsils themselves in the tuberculous process. These tubercle bacilli were found in the tonsil, partially through the tonsil, and many of them were not found in the tonsil at all.

The removal of tonsils for tuberculous glands, as the doctor suggested, can not always be clearly determined. We are not always entirely clear upon the effect that the tonsil may have in the production of tuberculous glands. Nevertheless I would say that, even though the cases that he cited did not give him the results that had been anticipated or hoped for in every instance of tuberculous glands in the neck, the tonsils should be removed, simply for the reason that they are, as we know, a portal of infection. There may be other reasons for the removal of the tonsils, but here is one: they are portals of infection at all times. In the beginning they are portals of infection, even though they are not diseased. How is that indicated? It is shown to us in this: The large tonsil, which we usually look upon as the least dangerous of all, shows that it has been hard at work in its attempt to throw off whatever infection has come to it. In other words, it is in a condition of hyper-function, and that is the reason it has become enlarged. It will keep up its excessive work for a certain length of time, but eventually it will get tired and will stop working, and then the infection will go right through. And as a matter of fact, in tuberculous cases—this applies particularly to children —where we have numerous enlargements of the cervical lymphatics, we feel that the removal of the tonsils, even though they show no active trouble, should be undertaken.

I am not entirely in accord with the doctor's view concerning the effect of enlarged tonsils in infectious diseases. He spoke of authorities that have proven that patients with enlarged and diseased tonsils really suffer less seriously, if I understood him correctly, in certain infectious diseases, such as diphtheria, than do those whose tonsils have been removed. I can't quite agree with that. It seems to me from my experience, as I look back, that diseased tonsils, and particularly enlarged tonsils, have been a serious menace to children suffering from the intense infections of scarlet fever and diphtheria, and I have seen numerous instances in which, after the removal of the tonsils, the patients apparently were not so prone to these conditions. I have in mind at the present time two cases—one in my own family and one in the family of a friend —children who had several attacks of diphtheria within a comparatively short time, that is to say, within a year or two; in the first case we finally removed the tonsils, and the child has never had an attack since. Of course that does not prove it altogether, I will admit; but nevertheless up to the time that this child had her tonsils removed she was constantly in danger, to our way of thinking. After the removal of the tonsils why should not this give the patient a certain immunity? Why should it not give the patient a throat condition which would be less liable to an infectious disease—we will say scarlet fever, for instance, where we know the angina is very severe. The tonsils form a larger surface and an absorbing surface for the infection; and so it does seem to me that, while I should not advocate the removal of tonsils simply to put the throat in a better condition in case the child should happen to get diphtheria or scarlet fever, nevertheless I am certain that in those cases in which the tonsils have been removed the infectious process is less intense.

The paper of Dr. Pearson is one that I feel like speaking very highly of also. The particular point that has always impressed itself upon me in thinking of sinus infections is this: There are cases going around all the time in all communities with a diagnosis, partly of the patients themselves, they possibly never having consulted their physician, of catarrh,

which we know means nothing, as the doctor has so well pointed out. These are often very dangerous cases. They often mean that the patient has a sinus infection which may at any time be lighted up and produce serious and perhaps fatal consequences. One could relate instances in which an acute cold, so-called, lit up an old ethmoiditis, and within a short time there followed an intense infection, a purulent meningitis and death. That is not at all uncommon, as these cases go. The systemic effect from suppurative processes in the sinuses is well known.

I had hoped that the doctor would dwell somewhat more upon the studies that were made by Murphy of Chicago, who pointed out to us the effect upon joints from disease in the sinuses. Rheumatism, we know, we have discarded as rheumatism; it is an infection; and the sources of infection are in the mouth, in the sinuses and the tonsils; and these sinuses offering such a great surface for infection are bound to produce systemic involvement.

Dr. Pearson: We have an excellent opportunity at this time to get information, and I would like to ask one question, if I may. I would like to ask Dr. Levy what ill effects he has ever noted following the removal of tonsils.

Dr. Levy: I have never seen an ill effect from the removal of tonsils (that is a broad statement), when the operation was done properly. I have seen operations produce deformed pharynges and as a result some interference with the voice; but when the operation is undertaken beforehand with care and properly performed, I have never seen any ill effects. As far as any constitutional ill effect is concerned, I don't think even when the tonsils are removed in an unskillful way there have been any ill effects. The ill effects that have been produced, have been local from scars and deformities and not constitutional. The question of the voice is the one that almost always enters into our consideration. A young woman with an excellent singing voice may need a tonsillectomy. She asks the question, "What effect will it have upon my voice? I understand that it will ruin it." The fact is that when no injury is done to the pillars and there are no scars in the muscles, the effect upon the voice will generally be nil; it has been known however that even the most skillful operation has somewhat altered the quality of the voice. In the very young or those that are just beginning the training of the voice, it has no effect. In those who have already acquired a method which to them is satisfactory, the operation has in some instances compelled them to alter their method of vocal production, and that sometimes is a hardship. The speaking voice is not at all affected, so far as I know.

I presume that is what Dr. Pearson has reference to, because that leads right up to a question of physiology—the function of the tonsils; we must confess that we don't know what the function of the tonsils is. I think, generally speaking, and knowing that the tonsils probably have some function, the question of their complete removal or not only enters into consideration in the very early years of life—up to three years. I think the consensus of opinion is in favor of a tonsillotomy before three years, and of a tonsillectomy after three years; but that is a big subject, and one that I should not like to place myself on record upon at this time.

J. W. Cokenower, Des Moines: I wish to add a little clinical experience along the line of the subject of the paper, and certainly I feel that we are fortunate in having this subject brought to us so forcibly, because I believe that it has not received the attention in the past the subject merited. It is nothing uncommon for cases of what was supposed to be tubercular joints, rheumatism and various other ailments of the joints, to be treated unsuccessfully, and afterward, by removing the tonsils, recover. These facts have come to my observation often; and by the way, too, I wish to give the report of one case that Dr. Pearson, one of the essayists, operated on. It was the case of a lady about forty-five years old, who had arthritis of the knee and had been confined to the bed for quite a number of months; and after consulting many different surgeons and internists and Dr. Billings suggested that the tonsils be removed. They returned home, and Dr. Pearson removed the tonsils, and in three months from that time the knee was well and the lady walking around and knows nothing about joint disease since. That case is only one among many others of the same kind. In fact, the oropharynx, including the tonsils and not excluding diseased teeth, in my opinion is a septic tank for infection, and the system at large has to pay the debt, and the joints as a rule have to assist largely, because they are the ones, especially the epiphyseal portions of the bones, that we notice most. So I believe that

in all joint disease, no matter what it is or where located, in diagnosing, and before giving treatment, we should invariably examine the tonsils.

I certainly have appreciated the discussion very much.

W. L. Bierring, Des Moines: A great deal of emphasis has been laid upon the immediate results of sinus infection and especially of infections of the frontal cavity; but I wonder if we appreciate the possible chronic effects, if they might be so called, of a latent and long-standing focal infection, whether it is in the sinus, the antrum, in the tonsil, a carious tooth or about the gums. While I appreciate the difficulty sometimes in establishing the connection, there can be no doubt that many an instance of so-called chronic nephritis, and the chronic forms of myocarditis or myocardial degeneration, and further, I am sure there is an occasional instance where a pernicious anemia can be associated with a sinus infection. All of these are insidious processes, often long-delayed but indicative of some form of systemic toxin, bacterial or otherwise, that gradually destroys parenchymatous cells, like those in the kidney, liver and the heart muscle cells, and likewise interferes with hemogenesis. I can recall distinctly an instance where a case of pernicious anemia with very extensive postero-lateral degeneration of the spinal cord could be distinctly traced to a long-standing sinus infection.

In all of this discussion there is brought very vividly to our attention the excellent work of Rosenow of Chicago in illustrating the newer bacteriology or the transmutability of micro-organisms, particularly those that are situated in the buccal cavity and are usually referred to as some strain of streptococcus, or diplococcus or pneumococcus. Rosenow has very clearly shown that it only requires some change in environment, or culture media, to transpose this type of organisms into distinctly different series or strains. In one instance the infection is manifest as tonsillitis, as endocarditis, and again as an acute cholecystitis; and he has gone so far as to develop a strain capable of producing typical peptic ulcers in the stomach and duodenum. If it is possible, then, to so experimentally transmute micro-organisms, we can easily understand how this same interchange or change in characteristics in the pathogenesis of micro-organisms can occur in different parts of the body. And so, again, these various focal sites of infection in the tonsils in the antrum and in the buccal cavity, assume an importance and illustrate still more the necessity of a closer association between the workers in special fields and those interested in general medicine.

Dr. Gratiot: I prefaced my remark in regard to the removal of tonsils with the assertion that it did not prevent children from contracting contagious diseases—that is, children with large tonsils. I did not mean to say that they were not any more liable. It is possible that they may be more liable to contract these diseases. But my chief reason for that is that in an institution in Dubuque, where there are a large number of children, we had recently an epidemic of diphtheria, and some two months previous to this time there had been eight children who had had their tonsils removed. Out of the eleven cases, five had the tonsils out, and the only fatal case was in one of these; and the other one that had very serious complications was a child that had no tonsils and no adenoids. Out of the others there were three children that had very large tonsils, and if it had not been for the fact that we made a general inspection of the throats of all of the children, we would not have known that those three children had any diphtheria at all. If they had not had antitoxin, of course they might have become more serious.

Again, recently in a family in Dubuque (of course these two cases do not prove anything) during this epidemic of diphtheria, we lost three children from a particularly malignant type. All the three had had tonsillectomies. The only surviving child was one that had very large tonsils, that they were about to have operated on. In fact, two of these children were moribund before they called a physician.

Dr. Pearson: If I may be permitted a few moments to discuss Dr. Gratiot's paper, it is a subject that the throat man has constantly before him. One factor that has been emphasized is the necessity of having the patient carefully examined by the internist in these cases. Often cases are presented to me suffering with rheumatism, and I wonder if the removal of the tonsils will do away with it. I always get the opinion of the internist after he has made a critical examination; then I usually say, "I am sorry to say I can't speak definitely on this point." A great many of these cases seem to have immunity following the removal of the

tonsils, but we do know that many of them do not; take your choice. "I always put it up to them in that manner. On the other hand, we do occasionally see some of the most striking cases. I have in mind a little fellow whom I saw, perhaps six months since, a perfect marvel in muscular development; not that he had been an athlete; he was a carpenter; but he was simply born that way. He said his father had the same muscular development. Every morning for years this man had to straighten out his muscles, one at a time. If he was carrying a box on his shoulder, he complained of the sensation of soreness. After the removal of his tonsils I happened to see him perhaps two or three weeks later. He said he would not have believed that anything could have brought about such a change; that he had experienced absolute freedom from that condition that he had had for years.

I hope the next few years will tell us more about the different sources of infection. We are getting a little ahead, I think, when we are ascribing everything to the tonsils. We have the gall bladder, the appendix, the organs and other points of infection. It does seem to me that the next few years will give us much more light on this and enable us to differentiate so that we can better advise our patients relative to the tonsil question.

There is one point that I wish to emphasize. I mentioned it in my paper, and as I said, I would have liked very much to have had the time to present case histories. I don't like to go too far into a case history proposition, because a few cases prove nothing; but in the question of operating on these sinuses, the danger of osteomyelitis, especially from the open operations on the frontal sinus is not to be overlooked, some of the most disastrous results have followed. The way the infection has crept into the diploe between the plates of the skull, and the different operations have been employed to check it, indicate in a measure how unsuccessful they are. The course of some of these cases cover a number of years, apparently healed, but the first thing we know there is a recurrence and the ultimate result is a fatal termination. We must realize when we enter upon work of this kind the possibilities, and weigh thoroughly the chances of complication before we make our recommendation.

GOITRE—A BRIEF CONSIDERATION

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History. To Theodor Kocher, of Bern, Switzerland, belongs the honor of calling the attention of the entire medical world to the goitre question. By his skill and industry as a surgeon he developed a surgical procedure which is adopted by surgeons everywhere. Moebius, through his pathological and physiological studies, taught us the important lesson that exophthalmic disease is due to an excessive absoption of the secretion of the diseased gland. In 1835, Graves described this disease in his lectures and therefore the name Graves disease became attached to it. In 1840 Von Basedow described it in German and hence the name Basedow's disease. As early as 1828 Adelman described the goitre heart. But the most important historical fact is this, that Moebius was able in 1886 to establish the fact that exophthalmic goitre is a "form of poisoning of the body through a diseased activity of the thyroid gland." In this country Drs. C. H. Mayo and A. J. Ochsner have done great work in diffusing knowledge among the profession of this disease and establishing a safe operative technic.

Definition. Goitre has been clinically divided into two classes, (a) simple or non-toxic, and (b) exophthalmic or toxic. Physiolog-

ically in simple goitre the secretory function of the secreting cells is decreased and is a chronic process. The decreased secretion is due to a parenchyma atrophy which is a pressure atrophy. Simple goitre should be regarded as multiple retention cysts filled with non-absorbable material, cell detritus, etc. (Mayo). Exophthalmic goitre is the one in which the secretory function of the secreting cells is increased, and is usually an acute process. Anatomically and pathologically both are characterized by hypertrophy and cellular hyperplasia. Simple goitre may be defined therefore as an hypertrophy and hyperplasia of the thyroid gland in which the secretion of the parenchyma cells is decreased. Exophthalmic goitre is characterized by the same hypertrophy and hyperplasia resulting in an increased secretion of the parenchyma cells and an increased absorption. The symptoms of simple goitre are due to an insufficient quantity of thyroid secretion, the degree of the symptoms depending on the extent of the deficiency, the extremes being myxedema and cretinism. The symptoms of exophthalmic goitre are due to an excessive secretion and an excessive absorption of thyroid secretion, manifested in the well developed form by rapid heart, tremor, sweating, diarrhea, resulting loss of weight and exophthalmos. In the simple form we have to deal with a thyroid which is incapable of performing its normal function, incapable of producing a sufficient quantity of thyroid secretion to maintain a normal balance of health. In the exophthalmic form we have a thyroid which is not only capable of producing a sufficient quantity of thyroid secretion, but is capable of over-producing the normal amount required for health—capable under certain exciting causes, such as fright, which comes through the nervous system, pregnancy, or some one of the infectious diseases, of going on a rampage and flooding the system with such a quantity of its secretion as to unbalance the physiological function of every organ in the body. Physiologically and clinically the symptoms of the two forms of goitre are opposites. Anatomically and pathologically all we know about either form is that they are both characterized by hypertrophy and cellular hyperplasia of the parenchyma of the gland. Clinically it would appear that there are two forms of goitre. Pathologically we know only one form. What process it is that produces the two sets of directly opposite symptoms out of the one and the same form of pathology, we do not know. Perhaps we shall not know until some one finds an open thyroid duct through which he can study the functions of this interesting, and so far mysterious, gland, and observe its behavior under different forms of stimuli. You will recall that it was in this way that the stomach and salivary glands were compelled to give up their secrets. They knew nothing about the stomach until the man, Alexis St. Martin, was found with a stomach fistula. The same is true of the salivary glands.

In the first place the thyroid has the richest blood supply of

any organ in the body. "In proportion to its weight it receives 28 times as much blood as the head, and all the blood in the body passes through it, as it does through the brain, once every hour. It has been shown to be five and a half times more vascular than the kidney." (Mayo). The lymphatics are numerous, but those leaving the gland are small compared with its large blood supply. Baumann has shown that there is a large iodine content in the human thyroid. There is also well grounded evidence to encourage the belief that it is this iodine content, the excess or the lack of it, which is the active cause of the symptoms—in the exophthalmic form it really being a sort of iodism.

Thyroid enlargement may be caused by demands made upon its secretions by certain systemic conditions, such as the developing period of early adolescence, the hyperemia of menstruation and pregnancy, the menopause, and perhaps in the large per cent of cases the demand made upon the iodine content by the various infectious diseases. This looks highly probable since it has been shown that a possible function of the thyroid is that of an antigen or bacteriolysin, a neutralizer of the various toxins entering the circulation. In endemic, or water-born, goitre, for instance, the demand is to overcome the chronic intestinal toxemia.

Cardiac insufficiency due to cardiac dilation, nerve changes, are late results and will become less frequent as the diagnosis and treatment become more prompt and intelligent.

Treatment. Dr. Ochsner says more than one-half of all cases of goitre will recover under careful dietetic, hygienic and medicinal treatment, and this refers as well to exophthalmic goitre. The enlarged hyperemic glands of early adolescence, so often seen in high-school girls, are as a rule promptly reduced by rest in bed, ice to the gland, and Fowler's solution, because arsenic has been shown to have an inhibiting influence over the functional activity of the thyroid cells. Hygienists and clinicians have advised change of drinking water (Dr. Ochsner says boil the water) and environment, meat-free diet, rest, iodine, belladonna, hydrobromide of quinine, and special sera, with the result that no recognized specific is apparently known, at least not practiced, (MacCarty). Treatment, however, depends on the fact whether there is an excess or deficiency of thyroid secretion, and whether there is an increased or decreased absorption of this secretion; more specifically, whether there is an increased or decreased activity of the producing cells. If there is an increased cellular activity, and since the resulting secretion is rich in iodine content, then there is already too much iodine furnished to the system and iodine should therefore not be given. Neither should thyroid extracts be given because the medicinal activity of these various thyroid preparations depends on their iodine content. If the activity of the producing cells is decreased then give iodine and the desiccated thyroids, but always with great caution. Rest, bella-

donna, arsenic, hydrobromide of quinine, and ice to the enlarged gland, is the recognized treatment in the exophthalmic cases. Let it always be remembered that we do not know just what any one thyroid will do under treatment, or without treatment for that matter. An apparently innocent goitre, i. e. a goitre whose producing cells are furnishing a normal or inadequate supply of secretion, may easily be stimulated into an over-action causing an over-production and over absorption of secretion and result in an unbalance of health. In other words a simple, or non-toxic, may easily be turned into an exophthalmic, or toxic goitre. This happens often enough anyway in the natural course of the non-toxic group. We often have patients come to us saying, "I have had this goitre 10 or 20 years and it never caused me any trouble. Now during the last 6 or 8 months I have lost 25 pounds in weight, am nervous, and my heart beats fearfully, etc. What was it that wrought this change? That stirred up this apparently innocent goitre? What stirred up this sleeping dog? Perhaps the history will show that the patient went through a trying childbirth, or had a severe tonsillitis, or other infectious disease; or her nervous system suffered some severe strain such as fright or great sorrow. So you see we are around the circle again to the point where we said we did not know anything about goitre except this one thing, viz., that underlying all goitres, whether toxic or non-toxic, there are always hypertrophy and cellular hyperplasia. This is all we do know positively about this interesting subject.

Surgical cases come mostly from middle life, i. e. after the 32nd year of age. Plummer has shown that the symptoms which lead to the diagnosis of exophthalmic goitre do not, as a rule, manifest themselves till after that age. The surgical side of the goitre question I will omit in this paper as it may not interest an audience made up mostly of general practitioners. You may take up this side of the subject if you wish to in the discussion because we all know that surgery has wrought many brilliant cures; the main object of this paper being only to bring out some practical points in diagnosis and treatment.

The parathyroids, those wonderfully strange little bodies, usually four in number, having no relations whatever to the thyroid gland physiologically, only a near anatomical situation, I will not mention as so large a subject should have a paper by itself. Enough to say that they are necessary to life and when removed from the human body death takes place usually suddenly and tragically. It is therefore unnecessary to say that these bodies must not be disturbed during operation.

CARBON MONOXIDE POISONING—REPORT OF TWO CASES

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The purpose of this paper is to report two very interesting cases of carbon monoxide poisoning, one fatal and the other surviving and suffering, at present, from a peculiar mental disturbance. In order to derive any benefit from the history of these cases, it will be necessary for me to give in detail the circumstances surrounding this particuliar unfortunate accident, as the treatment after its occurrence is of little value and our efforts should be directed toward its prevention where possible.

Two Russians, aged 21 and 28 respectively, in apparently the best of health and no previous history to the contrary, applied at a local barber shop and bath rooms for a bath, on May 16th, 1914, at 10:00 a. m. They were escorted to the baths by an attendant who started water running in the tubs and instructed them to turn it off when the tubs were sufficiently filled. The bath room consisted of a room 12x16, divided into two booths each opening into a hallway which contained a gas heater and water tank. The heater was of the new patent instantaneous type which automatically lighted when water was withdrawn from the faucet into the tubs, and burned ordinary commercial illuminating gas. It was provided with flue which connected with a chimney. The apartments had no openings from the outside except the door from the barber shop, thus precluding admission of fresh air.

About one hour after the men entered, the barber went to hurry them a little, as other customers were waiting, and looking over the booths saw both men on their knees beside the tubs with the water still running. Says he thought they were praying, so did not disturb them for another half hour when the doors were broken and both men found unconscious in kneeling posture.

Arriving on the scene a few minutes later, I found the younger man dead, the survivor unconscious and breathing with difficulty. Applied artificial respiration until the arrival of the pulmotor with which we administered oxygen and artificial respiration for thirty minutes without results. Next applied the pulmotor to the survivor to whom a colleague had been giving artificial respiration, and, with the exception of the first few inhalations, could see no great benefit, except possibly that respiration improved. This improvement was very slow, the patient being brought to the hospital in a semi-stuporous condition, struggling violently, and requiring a straight jacket to keep him in bed.

The subsequent history of this case is as follows: was semi-conscious but in a constant restless resistant condition, struggling, with eyes closed. Refused all our efforts to give him nourishment by mouth. Was completely aphasic, not uttering a sound except grunting or blowing for five days.

Physical examination: Well nourished, muscles very well developed, weighing about 170 lbs.; skin moist and pink colored; pupils dilated equally, reacted to light; kept eyes closed; tongue dry and coated with a white powder-like substance; no facial paralysis or contractures; heart regular, temperature 98.6; lungs negative; abdomen negative.

Reflexes: Patellar exaggerated; cremasteric present; no ankle clonus or Babinski; thermal sense o. k.; tactile sense increased, hyper-sensative over entire body; urine negative; blood examination, with sodium hydroxide 15 per cent, gave dark brown color as shown by specimen.

Patient remained in this condition for about five days, sweating profusely, struggling and refusing nourishment, urination involuntary, no bowel movement though magnesium sulphate was given in repeated doses for two days. On the fourth day, the patient took a little milk and became more quiet, and, upon being released, got out of bed and walked around the room apparently in a dazed condition unconcerned as to his surroundings. Continued in this stupid condition, standing in one position for hours or until taken back to bed. Movements were deliberate and automatic. Kept eyes closed and rubbed his head almost continuously for three days as though suffering with pain in the head, and became greatly emaciated On the 20th day, accepted food for the first time and ate ravenously. Appetite has been fairly good since except days when he seems to have headache. On the 30th day, dressed himself for the first time and uttered a few words in foreign language but his countrymen say his talk is irrational. From a few days after admission to the present time, has responded to calling him by name and the past two weeks has shown great improvement, noticing his surroundings and desires to be out of doors. Has even taken the window casing out in effort to get out, showing great skill in doing so without tools of any kind. His facial expression was perfectly blank for about twenty-four days when he began to have a meaningless laugh which is provoked by even looking at him. Has apparently no esthetic sense, not using toilet. Memory seems lost as to past events.

Treatment: On admission, was given oxygen almost continuously for three hours, strychnin 1-30, and morphine to quiet him; normal saline subcutaneously at short intervals during the first twenty-four hours, since then has received very little medication except laxatives, requiring croton oil on three occasions to get an evacuation. After giving croton oil on one occasion, an error was made in recording and patient had no bowel action for ten days and apparently no untoward effect following.

As stated at the beginning, our treatment should be preventive. This can be accomplished by educationg the public as to the danger of this deadly poison produced, as in these cases, by the use of the gas

heater in bath rooms, carbon monoxide being formed by action of the intense gas flame on the besooted surface of the coils and the rapid consumption of the oxygen in the air. Examination of gas fittings made at the time of this accident showed no leakage and a person entering the room was unable to detect the slightest odor.

The most common source of carbon monoxide is its production in coal fires in grates, stoves and furnaces, the blue flame at the surface of the fire showing its presence. It is formed in lamps turned low, in coal mines by the use of explosives and by the slow combustion of wood in closed rooms. CO poisoning is the cause of nearly all the deaths in colliery explosions and in underground fires; and the occurrence of CO in connection with heated coal and the use of unsuitable or improperly handled explosives in ill-ventilated parts of a mine, often gives rise to much trouble. To understand the significiance attaching to the presence of varying proportions of this gas in the air, it is necessary to give some account of its mode of action.

The oxygen absorbed by the lungs from the air is normally taken up by the blood in the form of an unstable chemical compound with the red coloring matter (hemaglobin) of the blood, and so carried by the circulation to the tissues, where it is used up. Hemoglobin not only combines with oxygen, but also forms a far less unstable compound with CO; and hemoglobin saturated with CO cannot take up oxygen. In proportion, therefore, as CO-hemoglobin is formed the blood loses its power of carrying oxygen to the tissues, and death from want of oxygen finally ensues. It will readily be understood, however, that, since oxygen as well as CO has an affinity for hemoglobin, the extent to which the latter substance can become saturated with CO will depend on the relative proportions in which oxygen and CO are present in the air. The one gas tends to drive the other out from the hemoglobin, and the final result is an expression of the balance struck between the two conflicting processes. If the percentage of CO in the air is so high that too little of the oxygen compound is left to support life, then death ensues. If, on the other hand, the person is removed to fresh air before death occurs, then the carbon monoxide is in the course of several hours turned out of the hemoglobin and passes off in the breath; and this process may be greatly hastened by artificial respiration where required, and by the administration of oxygen. If, finally, the person remains exposed to a moderate percentage of CO, the blood ceases after a time to take up more CO. In the case of the living body it may be roughly stated that with about .08 per cent. of CO in the air the hemoglobin will finally become about half saturated with CO, while with .04 per cent. it will become a third saturated, and with .16 per cent two-thirds saturated, etc.

A further point of importance is that with the small percentages of CO which are commonly met with in mines it may take a

considerable time for the blood to become sufficiently charged with CO to produce symptoms of poisoning. A man may thus go a long way into a poisonous atmosphere with out experiencing any effects; and it may then be impossible for him to return. The volume of blood in a man of average weight has been found to be about 3 litres, or 5 1-4 pints, and it is capable of entering into combination with about 600 c.c. (1 pint)) of CO. Supposing that he is breathing air containing 0.2 per cent. of CO, and that he is at rest, when he will only be breathing about 7 litres of air per minute, of which only about 5 litres will reach the air-cells of his lungs, he will evidently not be able to absorb more than 50 times .2=10 c.c. of CO per minute; and it will thus be at the least half an hour before his blood becomes even half saturated with CO. If he is moving about or working he will breathe more air, and probably absorb more CO; but in any case it will take some time for the blood to become so charged with CO that he feels the effects of the poison. In an actual experiment made during rest it was found that with .2 per cent. of CO in the air the hemoglobin did not reach 50 per cent saturation till after 70 minutes, so that, as might be expected, most of the CO breathed during this period was not absorbed.

The symptoms of CO poisoning are essentially the same as those produced by air deficient in oxygen, and vary according to the degree of saturation of the hemoglobin with CO. With 20 per cent saturation the only symptom is a slight tendency to dizziness and shortness of breath on exertion. As the saturation increases, however, the symptoms of want of oxygen become more and more pronounced, until at 50 per cent saturation it is scarcely possible to stand, and even slight exertion causes temporary loss of consciousness. The onset of the symptoms is very insidious, there being only slight shortness of breath and palpitation, but hardly any discomfort; and the senses, power of judgment and of movement, are commonly much impaired before the person is aware of anything being wrong. In some cases there is much excitement, but often there is simple drowsiness and stupidity. The symptoms are in some respects similar to those produced by alcohol. One curious fact is that in CO poisoning, as in alcoholic poisoning, sudden exposure to cool fresh air may greatly increase the symptoms. Death seems often to be immediately brought about by muscular exertion, as in attempts to escape rapidly up ladders, inclines, etc. If death occurs gradually, the hemoglobin is usually about 80 per cent saturated with CO. In the case of persons who have been rescued alive, but still unconscious, after long exposure to CO, death often occurs later in consequence of damage to the tissues during the exposure.

The dangers of CO poisoning, and the symptoms which accompany it, are very graphically described in the Report to the Home Secretary, Clement Le Neve Foster on the fire at Snaefell Mine in London in 1897.

The percentage of CO which is fatal, if sufficiently long inhaled, to men and animals seems to vary a good deal in individual cases. As little as .17 per cent is sometimes fatal to animals, though usually about .4 per cent is required to cause death within a moderate time. Anything above .15 per cent must, however, be regarded as distinctly dangerous, and probably anything above .03 per cent would in time produce symptoms distinctly felt on any exertion.

What concerns us most, however, is the way CO poisoning might occur in our own homes, i. e., by ordinary use of kitchen range with doors of room closed and also by heater in the bath room, and personally I think that everybody using gas for such purposes should be made acquainted with its dangers under these conditions as its action is so insidious, without odor of any kind, that the victims have no warning.

Post mortem on first case was very interesting. Body, that of a man aged 21 years, weight 140 lbs. Body rigid; skin cherry pink with slight motleying of anterior surface of legs; pupils equally dilated. Blood withdrawn from brachial vein was bright red and retained a cherry red color when treated with NaOH 15 per cent., the control giving dark chocolate color as did also the blood of the survivor. On section, the tissues were all of the same cherry red appearance, heart, lungs, kidneys, spleen, being engorged and bright red. Bladder contained few ounces of urine, examination of which was negative. Brain showed same bright red or pink appearance.

The specimens of blood, showed very nicely the Hoppe Seyler test which was positive on the fatal case giving cherry red color which it still retains, and negative on the survivor which gives a dark brown as it does on normal control. This would indicate that the survivor did not have sufficient carbon monoxide combined with the blood to give the reaction, and, not having seen any reports of cases other than fatal cases where reaction was present, think the test of little value in determining degree of intoxication or prognosis.

The question might be asked: What caused the death of one of these cases and not the other, both being subject to the action of gas the same length of time?

From autopsy finding and blood examination, death must have been due to direct action of poison on higher centers, paralizing the respiratory and cardiac centers as it did not have time to produce any degenerative changes. My only explanation of the one surviving is as follows: Peterson & Haines' Toxicology states that the blood takes up carbon monoxide froming carbon monoxide hemoglobin, a firm chemical compound, thus replacing the oxygen volume for volume, which in the ordinary adult would be about three litre, 5 1-2 pints; so, in answering, only surmise that the sur-

vivor, being some forty pounds the heavier, could stand more, and he also was closest to the outside door so that when the attendant made his first investigation he received some fresh air from outside which the other man did not.

What is the pathology in the second case which causes his mental condition?

According to the text books and reports on the subject, the best of which I obtained from an article by McConnell & Spiller in the Journal of A. M. A. Dec. 14, 1912, in carbon monoxide poisoning there follows a degeneration or softening of the lenticular nucleus which is bilateral and about the same as produced by phosphorous poisoning. In the same article, Sibelius is quoted as thinking that after carbon monoxide poisoning several organs are affected, and by imperfect elimination injurious metabolic substances are retained and affect the cerebral vessels. This he gives as an explanation of cases in which symptoms did not appear until several days or weeks after patient had apparently recovered.

In this case, there have been motor and sensory disturbances, as described in all cases reported, which would indicate organic changes, his condition seeming to be purely psychic giving him the appearance of an imbecile. For that reason, have not received any aid as to prognosis in this case, from the literature. At the present, patient seems to be improving and hope that the poor unfortunate will not have to spend the remainder of his life confined to an asylum as the result of this unusual accident.

This case left my care August 20th, when he was committed to the State Hospital at Cherokee. Supt. M. N. Voldeng has kindly given me subsequent report and diagnosis, for which I am deeply indebted, as follows:

Present mental status:—On admission is found to be quiet. He does not have a clear understanding of his surroundings; as a matter of fact, he can not express his thoughts. Has a certain form of aphasia. Has both motor and sensory aphasia. Can not express the words desired. This individual also is incapable of recognizing certain objects. He will repeat sentences and words uttered by others. Has considerable difficulty in expressing the proper words. His condition of aphasia is very marked. This individual is not able to enter into conversation. He not only is incapable of speaking intelligently but lacks understanding, even of ordinary simple sentences. Patient is evidently weak-minded, probably has never been strong mentally. His memory is very poor for the past and present. It is impossible to determine whether or not he has delusions: seemingly he is somewhat deluded. Has a tendency to wander from subject to subject. There is some incoherence in thought.

Diagnosis:—Organic Dementia.

FOREIGN BODIES IN THE STOMACH

B. F. DENNEY, M. D., Britt, Iowa.

The extreme rarity of such cases, leads us to report the following which came under our observation recently. The symptomotology presented and the final outcome of the patient's condition is quite interesting and the basis for much conjecture.

History:—Patient A. O. age 7, male, had the usual diseases of childhood, never seriously ill, has always been in good health and apparently normal mentally; very quick to learn in school work. Four brothers and three sisters, all healthy. Mother and father normal physically. Mother is of a very nervous disposition. Patient always a hearty eater, and digestion has been good. A few days previous to present attack was exceedingly hungry, though a few bites seemed to be all he could swallow. Complained of feeling stuffy and yet hungry.

Present Illness:—Saw patient Nov. 11, 1913. Examination showed following: slight headache, cheeks flushed, tongue coated, breath offensive, chest negative, abdomen (very) slightly distended, temperature 100, pulse 98, Resp. 26. Parents say bowels had not moved for two days. Quite tender over McBurney's point. Some diffuse tenderness over entire abdomen. Right knee and limb flexed. Some rigidity of right abdominal muscles. No rigidity over left side. Patient complaining of pain over McBurney's point and vomiting large quantities of mucus and bile. Refuses to drink any water or take any kind of food.

Thinking it an ordinary case of billiousness, with possibly a mild attack of appendicitis, gave 1-10 gr. calomel every half hour for 10 doses, to be followed with castor oil one ounce; oil vomited, second dose administered and retained, but with no results. Ordered S S enema, this to be repeated every three hours to results, but nothing obtained for 48 hours, then a very small amount of feces containing 3 small pearl buttons. Temperature dropped to normal, 36 hours following first visit; pain practically all gone, rigidity of right abdominal muscles disappeared at end of 48 hours. Ordered more castor oil at this time. Second dose retained but with no results.

Vomiting subsided gradually and finally ceased at about the end of 10 days. S S enema continued at intervals of 6 hours for ten days, also ordered olive oil ounce tid. This was continued through entire course of treatment. By the end of second week had obtained the articles shown in photograph and as mentioned here:—

16 large and small buttons, (brass, pearl and rubber), 14 ordinary carpet tacks, some crooked and rusty, having been used, 3 22-long cartridges, loaded, 2 copper harness rivets, 5-8 inch long, 1 small iron brad, 1 ball of twine string, 28 inches long, 1 iron shingle nail, 1 piece school crayon, 1 inch long, 1 pair hooks and eyes, 1 col-

lar button, (brass), 1-2 cup shelled corn, grains whole, 1 iron burr, 1-4 inch.

There was no voluntary bowel movement while patient was passing the above, all being obtained with S S enema. Feces were very dry and hard and in balls or lumps.

On seventh day following first visit, patient began complaining

of some pain in region of hepatic flexure of colon. This diminished with hot applications, though continued more or less severe for 6 weeks, following the course of the colon its entire length. There was at no time any distention from gas nor could we palpate any tumor. The patient showed no elevation of temperature after first 48 hours, except during fourth week, when he contracted a severe bronchial pneumonia. Temperature at this time went as high as 104. This condition subsided in a few days leaving him in practically his former condition, though of course weaker. During fifth and sixth weeks of illness, pulse showed a decided intermittance, though full and strong and in evenings from 8 to 11 p. m. would go as low as 45 per minute, and would not at any time respond to a heart stimulant as one would expect under ordinary conditions.

Dr. C. M. Swale of Mason City saw patient at end of fourth week.

After six weeks and thinking patient had surely passed all of the foreign material from bowel, ordered castor oil one ounce. This was retained, but with no results. Five weeks following the finding of last foreign material was again surprised by finding in the feces, two needles, one very sharp, two ordinary straight pins, and a Lincoln penny.

Patient took olive oil one ounce (tid) for nine weeks. Unable to retain any food for 6 weeks.

Patient at present time is as well as ever. Appetite good, sleeps good and plays from morning to night.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

EDITORIAL

We still feel that the medical profession of Iowa should watchfully guard their interest by observing the development of the Workmen's Compensation Act in Iowa. Those who read the Des Moines papers will recall the fact that about October 27th there was a meeting of the representatives of the various accident insurance companies to protest against the state undertaking to administer a casualty company in the interest of the workingman. These gentlemen are business men and are looking after their interest. Whatever may be the merits of their contention, we shall not undertake to discuss. It is of interest to us only to know that all classes of men who earn their living by one kind of enterprise or another, look at their interest, except the medical profession.

In an address delivered before the American Association of Railway Surgeons a few weeks ago, we endeavored to call attention to the fact that the lot of the medical practitioner would become less and less desirable if some active steps were not taken to adjust the practice of medicine to certain industrial changes that were taking place not only in Iowa but in all parts of the country. We advocated at that time that every eligible practitioner in all the states should become a member of the State Society, and should be willing to bear the burden of $5.00 annual dues, and that business committees should be appointed to look after the interests of the profession. In order to accomplish this it would be necessary to increase the dues so that the expense of such committees might be borne by the entire profession. Many of the state societies are taking steps to gain a hearing of these conditions with a view of assisting the readjustments on a basis of mutual interest. In the November number of the Journal we call attention to the action of the New York State Society, and in this number we call attention to the action of the Ohio State Medical Sociey by publishing the resolutions adopted by the Society.

The Resolutions.

"Whereas, The Medical profession of the State of Ohio believes that a limit of $200.00 for the payment of hospital and medical bills is at times inadequate and therefore imposes an injustice upon the injured workman and physician, therefore be it resolved that the Industrial Commission be requested to recommend to the legislature the removal of the above limit, so that the amount may be left entirely with the Commission.

"Whereas, The Physicians of the State have had trouble in collecting their fees, chiefly in cases of minor accidents, because of neg-

lect on the part of the employers and employees to report the same, therefore be it resolved that the Commission be requestd to adopt such measures as will compel their employers and employees to make such reports.

"Whereas, There has been considerable friction between the medical profession and certain local and special medical examiners, because of the lack of fitness or tact on the part of the examiners, therefore be it resolved that the Commission be asked, before selecting such examiners, to confer with the officers of the County Medical Societies, who will be only too glad to furnish a list of men qualified to fill such positions.

"Whereas, The schedule of fees as adopted by the Commission has caused considerable dissatisfaction, therefore be it resolved that the Commission be asked to pay fees in accordance with the services rendered and based in part at least, on local fee bills in actual use in the community where such services were rendered. It is further the belief of this committee that the Commission could very properly materially increase the salary of the medical men in their employ."

Lead Poisoning Among Workers in Lead Industries.

Some curious facts are observed in the study of statistics gathered among industrial workers where lead is employed. It appears in America there are from ten to fifteen times as many cases of lead poisoning as there are in Germany and England. In England the mill-hands are supplied with proper clothes and every facility for personal cleanliness, and are compelled to avail themselves of it. They are given time for lunch, and are required to wash thoroughly before going into the lunch room which is the only place they are permitted to keep or eat food. Once a month a physician examines every one for signs of lead poisoning. It appears that none of these precautions are observed in America. In the pottery industry, the number of cases of lead poisoning in America is double that in Great Britain. The figures for Great Britain are one man out of twelve employees; in America, one man out of every twelve or thirteen, and in women one out of sixty-three employees as against one in every seven in America. Women and children are usually more susceptible to this poisoning than men.

It would appear from these statistics that something should be done in the way of exercising greater care in the protection of employees against lead poisoning.

Teaching Fellowships in the University of Minnesota.

It is announced that the University of Minnesota has adopted the method of teaching fellowships in the clinical departments of its medical school.

"It is arranged that the fellowships be in three grades; viz., first

year, $500; second year, $750; third year, $1,000. To be eligible to a first year fellowship a candidate, as a general rule, must have received his M. D. degree from an acceptable school and have served one year as interne in a good hospital. The fellows appointed under this system will give their entire time to study, research and such assisting in clinics as they may be prepared for. A course of study will be laid out for each fellow, adapted to prepare him for the specialty chosen by him. This course will include work in the laboratory branches, dispensary service, hospital service and investigation. It is probable that the course (of two or three years) will lead to a degree properly recognizing the specialty in which the candidate has worked. Arrangements may be made whereby these fellows can spend one year at the Mayo clinic and count the same toward the advanced degree. In order to inaugurate the system, the board of regents of the university has authorized the following teaching fellowships for the next school year; one each in medicine, in surgery, in obstetrics and gynecology and in eye, ear, nose and throat, each of $500. There is also provision for one $500 fellowship and one $1,000 fellowship in mental and nervous diseases, or in lieu of these a $1500 instructorship.''—The Boston Medical and Surgical Journal.

MEDICINE IN IOWA PRIOR TO 1876

D. S. FAIRCHILD, M. D.

History of Iowa State Medical Society (continued).

At the meeting for 1868 only three papers appear in addition to the President's address. Dr. Edward Whinery of Fort Madison reported a case of rupture of the uterus with abdominal section, recovery. This case was operated on March 29, 1865 by Dr. Whinery assisted by Dr. J. C. Blackburn of Fort Madison. The operation is described by Dr. Whinery as follows:

''On the 28th of March, 1865, at 8 o'clock A. M. I visited Mrs. S., of Niota, Illinois, a healthy Irish woman about 37 years of age, who, I was told was taken in labor about ten o'clock A. M. on the 27th. The first indication she had of approaching labor was the escape of the waters, soon after which regular labor pains supervened, and an ignorant mid-wife was summoned to attend her. Labor progressed regularly until about 7 o'clock in the evening when it was expected the child would be born in a few minutes. She was seized at that time with severe burning lacinating pains, or stitches, as she called them, throughout the abdomen, and the expulsive pains ceased. I found her sitting in a chair, leaning forward at an inclination of about forty degrees, and very unwilling to change her attitude. Her pulse was a hundred and ten, irregular, and fluttering; the countenance very anxious and pale, the skin cool and clammy. It was with difficulty I could induce her to as-

sume a position convenient for me to make an examination per-vaginam. I caused her however, to be held at an inclination of about forty-five degrees, and passing the digital finger of the right hand into the vagina and the left hand over the abdomen, I found the head of the fetus resting well down on the perineum, but by pressing firmly with my finger against the head, it ascended above the superior strait, and the whole body could be distinctly felt through the walls of the abdomen, she being of spare habit. The motion thus given to the fetus, very much increased the lacinating pains, and she cried out, "These stitches will kill me". My diagnosis was rupture of the uterus, and I informed her and her friends that her condition was very precarious. She tried to give her "Mutterkorn Thee" (ergot), but the stomach would not take it. The night was very dark and the husband and his friends were afraid to attempt to cross the Mississippi river in a row boat, as it was very high with much drift wood floating; she therefore spent the night in applying new corn whisky to the abdomen."

"I allowed the patient to assume the attitude first mentioned, returned home for my instruments and an assistant, Dr. J. C. Blackburn accompanied me. At 10 o'clock A. M., when we arrived, no change had taken place in the patient. My friend Dr. Blackburn thought, from the visible and physical appearances and my represetations of the case, that my diagnosis was correct, and we soon agreed upon the propriety of making the abdominal section. Dr. Blackburn administered the chloroform while I was preparing other matters. We placed the patient on her back on a table, and I made the incision on the right of the umbilicus, about six inches in length, through which I removed a large male child (dead of course), and the placenta, both being entirely above the uterus, which was contracted down into the pelvis. There was very little appearance of hemorrhage. The rupture was in the fundus from the anterior to the posterior wall. The edges of the wound were now brought together by sutures of silk, taking care to include all the structures except the peritoneum; then finishing the dressing with adhesive straps, a compress and a wide bandage. The operation and the dressing were performed in less than five minutes, and the patient placed in bed, still under the influence of chloroform. When she recovered from its effects, she expressed herself as feeling quite comfortable and grateful for her delivery from her intense suffering for so many hours. We expected peritoneal inflammation to supervene but in this we were happily disappointed."

"I visited her on the 29th, and found her comfortable; the pulse had gone down to eighty, and every symptom was favorable; the lochia was moderate in quantity; she had been nearly free from pain and slept well during the night, though she had not taken any morphia and quinia powders left for her, in case irritation and debility set in."

"March 30th and 31st continues without an unfavorable symptom."

"On the 3d of April, she sat up three or four hours in bed. The wound had healed by first intention."

"On the 5th, I took out the sutures and continued the adhesive straps, the compress, and bandage; she was then dressed and sitting up."

"On the 8th, the lochia ceased and she went about her ordinary house-work."

The two days meeting of the Society was devoted principally to organization and to questions of ethics. It appears also that sectarian and irregular practitioners were an unending source of trouble and any affiliation with one not practicing regular medicine, was a sufficient cause for discipline, and it required unremitting watchfulness to keep members in the straight and narrow path of professional duty. Probably less than one half of the medical profession in Iowa were graduates from medical schools; nearly one half of those holding to what was called regular medicine, had had not more than one term of medical lectures of from sixteen to twenty weeks, and nearly all who had diplomas received them after two such courses. Notwithstanding the small opportunities for medical education in this country at that time, the writer can recall the names of many strong and useful practitioners of medicine scattered over the state. As a rule these men stood for high ideals; were devoted to the interests of their patients, and were much loved and honored in their communities.

Prior to the year 1873 membership in the Iowa State Medical Society was open to all regular physicians of the state who might choose to attend. A Board of Censors determined the elegibility to membership.

In 1872, a new constitution was adopted, a section of which required that before eligible to permanent membership attendance as a delegate from a County, Local, or District Medical Society, Faculty of Medical Colleges, State Insane, Deaf and Dumb, and Blind Asylums, or permanently organized hospitals of twenty-five beds.

The membership at the time of the adoption of the new constitution and by-laws was about 60. The number of permanent members in 1874, two years later, 190.

Roster of Officers from First Organization of Society Until 1867.

1850.

Dr. E. Lowe, Burlington, President.
Dr. Elbert, Van Buren, 1st Vice President.
Dr. McGugin, Keokuk, 2nd Vice President.
Dr. Matthews, Burlington, Recording Secretary.
Dr. Sanford, Keokuk, Corresponding Secretary.

Dr. G. R. Henry, Burlington, Treasurer.
Dr. J. F. Dillon, Librarian.
Drs. J. F. Henry, McGugin, Elbert, Hull, Brookbank, E. D. Ransom, and Flint, Censors.

1851.

D. L. McGugin, President; J. F. Henry, first Vice-President; J. M. Witherwax, second Vice-President; E. D. Ransom, Recording Secretary; S. Ramage, Treasurer, J. H. Rauch, Librarian.

Censors—Thomas Siveter, E. Lowe, James W. Flint, J. F. Sanford, E. R. Ford, W. F. Grubb, and H. M. Mathews.

1852.

J. D. Elbert, President; J. F. Henry, first Vice-President; J. M. Witherwax, second Vice-President; S. L. Craig, Recording Secretary; J. F. Sanford, Corresponding Secretary; J. C. Wear, Treasurer; M. Cousins, Librarian.

Censors—D. L. McGugin, J. C. Hughes, E. Lowe, R. D. Barton, T. Siveter, W. L. Craig, S. L. Ramage, and E. D. Ransom.

1853.

J. M. Witherwax, President; Thomas Siveter, first Vice-President; George Reeder, second Vice-President; J. H. Rauch, Recording Secretary; D. L. McGugin, Corresponding Secretary; G. R. Henry, Treasurer; Asa Morgan, Librarian.

Censors—E. A. Arnold, J. E. Sanford, C. O. Waters, J. F. Henry, Wm. Craig, J. C. Hughes, and Ignatius Langer.

1854.

George Reeder, President; J. M. Robertson, first Vice-President; D. L. McGugin, second Vice-President; J. Howes, Recording Secretary; C. L. Chambers, Corresponding Secretary; J. H. Rauch, Librarian.

Censors—E. A. Arnold, J. F. Sanford, J. C. Hughes, J. T. Huey, J. F. Henry, W. L. Craig, and Thomas Siveter.

1855.

Thomas Siveter, President; J. H. Rauch, first Vice-President; W. L. Craig, second Vice-President; W. Bird, Recording Secretary; D. Atkinson, Corresponding Secretary; J. J. Page, Treasurer.

Censors—R. H. Wyman, T. Shriner, J. O. Skinner, J. G. Henry, J. C. Hinsey.

1856.

J. C. Hughes, President; A. D. Wood, Vice-President; M. Cousins, Recording Secretary; D. L. McGugin, Corresponding Secretary; T. Siveter, Treasurer; H. Carpenter, Librarian.

Censors—Wm. Gutch, V. V. Adamson, George Reeder, J. M. Witherwax, D. J. Collins, J. F. Henry, V. Morris.

1857.

Thomas Siveter, Presdient; M. B. Cochran, Vice-President; J.

C. Stone, Recording Secretary; T. J. Saunders, Corresponding Secretary; James Gamble, Treasurer; H. Carpenter, Librarian.

Censors—W. Bird, George Reeder, J. H. Early, J. H. Boucher, J. J. Sanders, T. J. Sanders.

1858.

J. H. Rauch, President; E. S. Barrows, Vice-President; J. W. H. Baker, Recording Secretary; W. Bird, Corresponding Secretary; M. B. Cochran, Treasurer.

Censors—E. J. Fountain, H. Murray, J. C. Hughes, A. W. McClure, James Gamble.

1859.

E. S. Barros, President; George Reeder, Vice President; Allen Phillips, Recording Secretary; Oliver George, Corresponding Secretary; M. B. Cochran, Treasurer.

Censors—D. L. McGugin, E. J. Fountain, A. W. McClure, J. S. Dimmitt, R. S. Lewis.

1860.

R. S. Lewis, President; J. C. Hughes, Vice President; J. M. Adler, Corresponding Secretary; C. W. Belden, Treasurer.

Censors—D. L. McGugin, George Reeder, George M. Staples, M. Cousins, Wm. Gutch, and George Irwin.

1861.

J. F. Henry, President; H. T. Cleaver, Vice President; J. H. Boucher, Recording Secretary; R. J. Patterson, Corresponding Secretary; P. McLaren, Treasurer.

Censonrs—J. C. Stone, E. D. Ransom, H. T. Cleaver, Wm. Gutch, A. W. McClure.

There was no meeting of the society in 1862 and 1863.

1864.

M. B. Cochran, President; J. W. H. Baker, Vice President; S. B. Thrall, Recording Secretary; R. J. Patterson, Corresponding Secretary; P. McLaren, Treasurer.

Censors—Jesse Holmes, J. M. Adler, Wm. Voght, J. Williamson, B. W. Thompson.

1865.

J. C. Hughes, President; J. Williamson, Vice President; J. W. H. Baker, Recording Secretary; W. F. Peck, Corresponding Secretary; Wm. Watson, Treasurer.

Censors—M. B. Cochran, S. B. Thrall, A. G. Field, J. M. Shaffer, James Gamble.

1866.

J. W. H. Baker, President; J. C. Lay, Vice President; W. F. Peck, Recording Secretary; A. M. Carpenter, Corresponding Secretary; M. B. Cochran, Treasurer.

Censors—Wm. Watson, James Gamble, A. G. Field, J. M. Shaffer, J. Williamson.

1867.

Wm. Watson, President; E. Whinery, Vice President; A. G. Field, Recording Secretary; E. J. B. Statler, Corresponding Secretary; M. B. Cochran, Treasurer.

Censors—A. S. Maxwell, J. Williamson, A. M. Carpenter, W. F. Lloyd, G. L. Carhart.

During the years of 1862-1863 no meetings of the Iowa State Medical Society were held on account of the Civil war. The meeting for the reorganization was held in Iowa City, Wednesday, June 1st, 1864, and the following officers elected: President, M. B. Cochran; Vice President, J. W. H. Baker; Recording Secretary, S. B. Thrall; Corresponding Secretary, J. R. Patterson; Treasurer P. M. McLaren.

History of the Drake University College of Medicine, and the Changes in the Methods of Medical Education During That Time.

D. S. FAIRCHILD, M. D., SR., Dean. (Jan. 29, 1904.)

The idea of organizing a medical school in Des Moines had its inception in the mind of Dr. A. G. Field as long ago as 1874 or '75. In August of 1875 I spent two days with Dr. Field at his suggestion discussing the advisability of forming a new mdical school, the difficulties in the way and the plans for the school if after mature reflection it was thought wise to add another to the already numerous medical colleges in this country. Dr. J. F. Kennedy joined with us and was one of the original protectors of the institution. In January, 1876, when the State Society met in Des Moines, a meeting was called at the parlors of the Savery Hotel, now the Kirkwood, to consider the question of a new medical college. At that meeting there were present Dr. Field, Dr. Kennedy, Dr. Osborn, of Council Bluffs, Drs. Thrall and Williamson of Ottumwa, including myself and some others whose names I am not able now to recall. No definite steps were taken, but the idea of a medical school in Des Moines was encouraged, perhaps because many members of the profession at that time were opposed to the State maintaining a school for the education of doctors. In September, 1876, at the meeting of the International Medical Congress in Philadelphia Dr. Field and myself had a conference with Dr. J. C. Hughes of Keokuk in relation to the same matter. Among other things, Dr. Hughes assured us that the organization and maintaining of a medical college was no easy matter and that such an undertaking involved much labor, many troubles and small returns. This observation left something of an impression on my mind at the time and I, as well as some others, have been frequently reminded of the wisdom of the veteran surgeon's statement in the years that have passed since then.

The times have greatly changed during the 38 or 39 years that

have elapsed since Dr. Field and I sat on the walls of the new Capitol which then had reached one story in construction.

We reached the Capitol that August evening in 1875 on the only car line that Des Moines possessed which ran from the court house on Court avenue to the old Capitol and back again with one mule or horse as the motor power. It was not a magnificent city, with great buildings, striking signs of enterprise, push and energy that greeted our vision, or gave us our inspiration, but rather what was beyond what seemed possible. Dr. Field assured me that the greatness of Des Moines was not in sight, (an observation in which I fully agreed), but was to come, and that in our own time we should see 100,000 or more inhabitants, and that we should certainly see a medical college grow up in this great center of Iowa's population.

In those comparatively early times various motives were given for the organizing of medical colleges. It was sometimes said that these enterprises grew out of a desire on the part of ambitious medical men to become professors; that it seemed to be a modest and dignified way of advertising. There was no doubt some evidence to support this view. In the older centers of population when the older schools could not supply enough professorships for all the ambitious practitioners of the healing art, new schools with high sounding names were brought into existence. In the West, State Universities were not thought to be complete without a medical department, regardless of the size of the town or the natural facilities for such work, and no town with possibilities before it could afford to be without a medical school—or, at least, that was the way local profession looked at it. Whether this was an important influence underlying the Des Moines undertaking, or whether it was a feeling that medical education was suffering for the want of a medical school in this city, I will not undertake to say. It may, however, be presumed that the profession here was not altogether free from ordinary human weakness.

In 1881 the work of organizing the school was taken up in earnest and again I was invited to take a part. This time Dr. Blanchard was the moving spirit. Dr. Field and Dr. Kennedy were still leading factors in the work. Some of the younger men were enlisted, notably Dr. J. T. Priestley. How the agreement as to the division of work was accomplished I am unable to state. One of the difficulties attending the organization of faculties in those days when medical schools were nearly private corporations was the arrangements for the leading chairs, particularly of Medicine and Surgery. At that time all who had an ambition to be medical college professors were qualified to fill any place, especially the more attractive chairs, and often it happened that much ill feeling was engendered because all could not be professors of Medicine or Surgery. All were general practitioners except the Eye and Ear men. All the difficulties were finally settled in our school, and the school year opened in October, 1882, with

the following list of professors: J. A. Blanchard, M. D., Des Moines, Principles and Practice of Medicine, and Dean of the Faculty; A. C. Simonton, M. D., Des Moines, Principles and Practice of Surgery; J. F. Kennedy, A. M., M. D., Des Moines, Obstretrics and Diseases of Children, and Secretary of the Faculty; W. H. Ward, M. D., Des Moines, Gynecology; J. T. Priestley, M. D., Des Moines, Anatomy, General and Destriptive; L. C. Swift, M. D., Des Moines, Physiology; W. W. Hale, M. D., LL. B., Des Moines, Materia Medica and Therapeutics; T. E. Pope, A. M., Ames, Chemistry; D. S. Fairchild, M. D., Ames, Pathology, Histology and Miscroscopy; E. H. Hazen, M. D., Davenport, Diseases of the Eye and Ear; F. E. Crutenden, M. D., Des Moines, Diseases of the Throat and Nasal Passages; Hon. Judge C. C. Nourse, Des Moines, Medical Jurisprudence; C. M. Colvin, M. D., Des Moines, Adjunct to the Chair of Gynecology, and Demonstrator of Anatomy. The requirements announced were three years in a doctor's office, including two courses of lectures of four months, the last of which must be in our college. We had simply adopted the standard then required by nearly all schools in the country. This was, indeed, a very imperfect course of training, and was felt to be so then, but even the great schools in the centers of medical education did not deem it safe to demand more. The private school must have a large roll of students and must have revenue, and the medical department of State Universities must make a showing to their respective boards of regents as an excuse for their existence. The following announcement was made in the Chicago directory, 1883, in relation to Rush Medical College:

"The annual course of lectures for the first session commences on Monday, December 4, 1883, and will continue sixteen weeks," that "the requirements for graduation are three years study with a reputable physician. Two courses of lectures, one of which must be in this institution (or two years' practice in lieu of one course)," etc.

Dr. Blanchard was the first Dean, and served about two years, when he was succeeded by Dr. Schooler who served nineteen years. The personal history of the school does not differ materially from the history of other similar schools. Sometimes there was harmony, and sometimes there was not. We drifted about from place to place; we had no home, and it appeared at times as if we had no friends. In 1887 we were adopted by Drake University, but our condition did not improve. The University seemed to have forgotten us and no adopted child was more neglected. I can hardly express to you the disappointments we suffered, often the feeling was so deep that abandonment of the enterprise was contemplated and had it not been for the heroic courage of Dr. Schooler and the loyalty of his assistants I am sure the school would have closed its doors long ago. It has been my good fortune to take up the work at the end of the dark days when the future seems assured. It has been my fortune to have been associated continuously with the school from its inception to

the present, and I am now the only remaining member of the original faculty who has served continuously, and I can now speak with the deepest feeling of the liberal policy which Drake University under the leadership of the new President, Hill M. Bell, has adopted toward the Medical Department.

The last twenty-five years has been marked by marvelous changes in our entire economic system. Inventions, transportations, and communication has been largely responsible for this. All the western world has been brought into competition and through the above mentioned instrumentalities.

This bringing together of widely separated populations, as measured by distance, has developed an intensity of activities which has heretofore been unknown and from necessity has changed our way of looking at things. Men whose minds had been engrossed with their own little affairs did not recognize the approach of this change until it was fully upon us and then were astonished that the government of our country had really passed into the hands of the few; that the control of transportation and communication was centralized; that industries, trade and commerce were no longer in the hands of the many, and that many of our old ideas of democracy had been swept away. This could be seen to be inevitable by thinking men, who saw in its approach a part of the social, educational and economic evolution of the world; old methods could not meet the new conditions, and the change must come; and resolutions, attempts at legislation, and protests, while they might delay could not stop it.

To meet the changed conditions, men must be better equipped or be forced to the wall. As a protest some tried to avoid the inevitable by adopting methods which the world has always known and which is now designated in the strong and expressive language of today as "grafts", but comparatively few, however are endowed with the faculties which will make this matter of "getting on" permanently a success; and it has come to be recognized that the great majority must have a solid foundation upon which to build; without this they must expect to be the servants or agents of the strong.

The medical profession had its traditions, but in the newer portions of the country they were not so firmly fixed that they could not be easily broken down when the changed conditions came.

During the past twenty-five years, we have passed and are passing through an evolution which the physician of 40 years ago could not have conceived of, however wise or farseeing he may have been. When this college was organized, none of us were fully satisfied with the facilities we had or with the course of instruction we could give, but followed the path that had been made by others, not much better, not much worse. As we look back over our past and the past of our neighbors we discover two things: first, the necessity of getting students as a means of existence, and second, the necessity of doing what we were afraid to do and what we did timidly and fearfully

What influence led us to extend our course to three years of 24 weeks each, then to four years of 24 weeks each, and finally to four years of 36 weeks each, it would be hard to tell. There was no written law that compelled us to do this, but there was a force in the great body of the profession which expressed itself through medical associations, the medical college association and the examining boards, and finally through state laws. But the laws came too late to do more than punish the deliberate wrongdoers. The reputation of a medical college in the past depended on making the course easy, rapid and sure. It now depends on making it difficult, long and uncertain. What has accomplished this? Not the colleges themselves, because they were timid, and like all industrial enterprises felt the general pulse first. The answer to this question is: first, the silent and indefinable influence of the general public which through its changed methods was demanding better things and greater responsibilities of all who attempted to serve it; and second, a higher sense of responsibility on the part of the profession itself. It is true the advancement of knowledge, the discovery of new facts of science, were factors in so far as to increase the responsibilities, but it must be remembered that it was these discoveries in various fields and their applications that have led the world into new ways of thinking. What, may I ask, would be the position of the medical profession if in face of all that has transpired during the past 25 years it had remained in its practice and training without change. The answer is too obvious to need formulating. I do not mean to say that the medical schools have been merely passive observers of the course of events and moved only as they were forced to move, they have gladly aided in this outward course and have deeply regretted that they could not move faster, and it must be remembered that it is only recently that liberal endowments have been made in support of medical education, and that university medical schools were just as poor as private schools, and that boards of regents were ready at any time to cut them off if they could not take care of themselves, or at least make a showing of reasonably large classes.

We can look with some satisfaction on the condition of the medical profession and feel that we are in a position to place ourselves along side with the progress the world is making in all directions. In view of the wonderful progress which has been made within the period before mentioned, and in view of the history of the past, can we say that the period of intense activity is nearing its end, and that we can dimly see in the future a period of comparative rest and conservation? I think not. What the world outside of the medical profession may do I cannot say, but in the medical profession there are certain things that are distinctly on their way and their culmination is clearly in sight. The profession is to be united into a solid body. There is to be a uniformity in the requirements of state examining boards. There is to be a uniformity in the minimum medical college

entrance requirements. There is to be a uniformity in the minimum medical college graduation requirements. These things will not be accomplished by legislation directly, but through the irresistible force of public profession opinion. Spasmodic attempts at resistance will be made, but those who make them will be overwhelmed and swallowed up. When what has happened is measured up and the forces estimated, that which is to come and how, can be easily determined.

History of Keokuk Medical College.

In October 1908, the Keokuk Medical College was merged with the College of Medicine of Drake University. Following is a brief history of this college.

The early history of the Keokuk Medical College, College of Physicians and Surgeons, harks back to Indiana. There in La Porte, was its cradle and birth. At the end of a year the weak infant was taken to Madison, Wisconsin, where it gained strength and became the medical department of the Wisconsin State University, then an institution on the edge of civilization in the far west, for this was before gold was discovered in California, and about the time that Fremont was exploring the Rocky Mountain country.

In a year or two, in 1847, the medical department at Madison decided to establish a branch at Davenport, and in 1848, only a year later, the branch became the whole college, the college by this amoeboid movement traveling across the Mississippi River. Its name then was the Medical College of the Upper Mississippi, the medical department of Wisconsin University, and it was the first medical college west of the Mississippi River. It has always been a pioneer in advancement, being also the first college in the world to admit women on the same terms as men. After a year at Davenport, which the minutes of the faculty meetings disclose as an unsatisfactory year, a committee was appointed, say these same minutes, to go and spy out the land in search of a more favorable location for the pioneer medical institution. The committee reported a few months later and recommended Keokuk as the best place for the nurture of the medical college. The recommendation was adopted at the same meeting at which it was presented, and in 1849, the college came to Keokuk, taking the name, The College of Physicians and Surgeons, Keokuk. The greatest force in it then was Dr. D. L. McGugin, who had just come from Mount Vernon, Ohio; he was a scholarly scientist and literateur, with a breadth and depth of learning that would make him famous today. He sent for his son-in-law, Dr. J. C. Hughes, who began as Demonstrator of Anatomy in the college, was soon after its Dean and its executive for many years. This man had wonderful capacity to organize and conduct large affairs, and not only wrote his name large in the medical history of the nation, but made the college one of wide influence and high reputation. Upon his death, in the early eighties, his son, also Dr. J. C. Hughes, became Dean and

remained in that position until just before the amalgamation of the two Keokuk colleges, in 1899.

In the meantime, certain changes in the status of the college occurred. Soon after coming to Keokuk, the legislature of Iowa made it the medical department of the State University of Iowa, and it was all of that University at that time. In 1870, changes in the constitution of Iowa required that all the departments of the State University be located at one place, and that place was of necessity where other departments had been built up and were in operation. So the sub-title of the Medical Department of the State University was dropped by this college, the name, College of Physicians and Surgeons, Keokuk, having never varied from its incorporation originally.

Early in its history it graduated two classes each year; but it kept constantly in the front rank of advancing medical education, lengthening its terms and increasing the number of courses before graduation, as the times changed to equal those of the most advanced schools in the country. And thus it kept upon its historic way until 1899, just half a century from its arrival in Keokuk, after the journey from Indiana through Wisconsin and Davenport.

In 1890, the Keokuk Medical College was organized by men who had been successfully teaching in the College of Physicians and Surgeons. Possessed of abundant capital, experience and energy, they were successful from the first, the year's enrollment being 143 students. Of the incorporators of this college, Professors Jenkins and Scroggs are still in the faculty. For a few years there was the most intense rivalry and competition between the two colleges in Keokuk, this competition resulting in the improvement of both, as well as in the fight for supremacy which is now looked upon as only an interesting reminiscence by those who were its chief factors—and most of them were engaged in working for the resulting greater college, until its close at the present time.

The Keokuk Medical College flourished, to the great satisfaction of its faculty, students and alumni, constantly enlarging and improving. In 1899, diplomacy replaced more strenuous opposition. The College of Physicians and Surgeons was then owned by Mrs. Amanda T. Hughes, the widow of its real builder, the elder J. C. Hughes, the daughter of its first president, Dr. D. L. McGugin, the mother of its later executive, the younger Dr. J. C. Hughes. A proposition that the Keokuk Medical College buy the College of Physicians and Surgeons was considered and debated by the two institutions during the spring of 1899, and finally terms were fixed for the sale of the older college to the corporation of the younger, and the combination of the two colleges under the name, The Keokuk Medical College, College of Physicians and Surgeons.

Drake and Keokuk Merging.

At the close of the first year of the merging of the Drake Uni-

versity School of Medicine, and the Keokuk Medical School, Dr. D. S. Fairchild resigned as Dean and Dr. W. W. Pearson was elected by the University to succeed him. Dr. Pearson was well fitted for the position, having high professional ideals and being a man of unusual business sagacity and executive ability. Under Dr. Pearson's administration the medical school made great advancement in efficiency and promised to be one of the leading medical schools in the West. The only difficulty that appeared to be in the way was the want of money to maintain the departments as they had been organized by Dr. Pearson and as required by the evolution of medical teaching in the United States.

Dr. Pearson and President Bell were united in the belief that if the medical school of Drake University could not reach a high degree of efficiency, it would be wise to close the institution. This sentiment was agreed to by the faculty and after united effort on the part of the University, the faculty, and the city of Des Moines, and after making some decided gains, it was felt that it would be impossible to finance the medical school in the years of the future, and therefore by resolution the University dissolved the Medical Department.

A Brief History of The Formation of the Iowa State Board of Health.

D. S. FAIRCHILD, M. D.

At the Davenport meeting of the Iowa State Medical Society, (1879) under the presidency of Dr. A. M. Carpenter of Keokuk, the question of the organization of the State Board of Health came up in response to a recommendation made by President Carpenter in his address. Dr. Carpenter said "And here, with every encouragement which a dependent and enlightened people, and an influential medical body can offer, we entreat you to individual effort in behalf of the establishment of a Board of State Medicine, to let your spirit expand beyond the restricted limits of personal concerns and embrace within its scope a pure benevolence, a generous and self sacrificing philanthropy. To say that you will passively submit to the stigma which an excusable apathy has entailed, is too derogatory to the character of your profession, too humbling to your pride as public spirited citizens of a growing commonwealth."

After he delivered this address, Dr. W. F. Peck moved that the address be referred to a Committee consisting of Drs. Robertson, Ransom, and Williamson, to report upon that part relating to the establishment of a State Medical Board, at 4 P. M. the next day. Dr. Peck's motion prevailed. In accordance with this resolution, the Committee reported as follows:—

"The Committee to whom was referred the President's address beg leave to report that we fully endorse the sentiments of the paper, and in consideration of the importance of its suggestions we respect-

fully recommend that in-so-far as it refers to State Medicine, the whole subject be referred to a special committee consisting. . . .members whose duty it shall be to present to the State Legislature, at its next session, a bill to regulate the practice of medicine and surgery. Also to provide for the registration of births and deaths; also to urge upon the General Assembly the importance of the immediate organization of a State Board of Health."

Signed by the Committee: W. S. Robertson, H. B. Ransom, J. Williamson.

It appears that at some previous meeting a Committee on State Board of Health had been appointed, and on the second day of the 1879 meeting, the Committee reported as follows:—

"Your Committee on State Board of Health would respectfully report that they caused to be presented to the last Legislature a bill for the establishment of a State Board of Health, similar to the Wisconsin law. It met with no encouragement and but little favor in the Legislature.

Your committee think that a little information on the subject published by authority of the State Society, and for use of the members of the next Legislature, and a continued effort on the part of the Society will ultimately succeed."

A. M. Carpenter, S. B. Thrall, J. J. M. Angear, Committee.

The matter of securing State Board of Health legislation had been discussed at various times before the Society before any definite steps were taken to secure such legislation.

At the meeting of the State Society in January 1876, Dr. P. J. Farnsworth of Clinton, read a paper entitled "The Relation of the State to Sanitary Science", which was devoted largely to the advantages of public health, study, and the advantages which would accrue to the state through the organization of a State Board.

Dr. Henry Ristine of Cedar Rapids in his Presidential Address delivered Jan. 30th, 1878, brought forward in the strongest manner, the advantages of a State Board of Health to the state and the general public, and laid before the Society the duties of the profession in urging the passage of such legislation.

June 5th, 1879, Dr. Holliday of Burlington, made a motion that a committee be appointed to secure, if possible next winter, legislation relative to the practice of medicine in the state, and the establishment of a State Board of Health. The motion was laid on the table.

At the morning session of the second day of the 1880 meeting of the State Society at Des Moines, Dr. W. S. Robertson, Chairman of the Committee on State Medicine, made the following report:—

"Your committee respectfully report that soon after their appointment they began the task of collecting material from which to prepare a "draft" for a law creating a "State Board of Health" for Iowa. The "health laws" of several States of the Union were ex-

amined and placed under contribution for the necessities of our commonwealth. After a comparison of notes, comments and suggestions from the members of the committee a "draft" was consummated. Desiring to profit by the errors and experiences of those who had long studied and carefully observed the practical operation of health laws, the chairman of your committee corresponded with that most accomplished sanitarian, Dr. John H. Rauch, Secretary of the Board of Health of the State of Illinois, asking him to arrange a meeting in the city of Chicago (at as early a date as practicable) with this committee, for the purpose of conference regarding our Draft of a Health Law, as well as a Draft of a Bill regulating the practice of Medicine in the State of Iowa. Although at Cairo, busily superintending the sanitation of that port, the Doctor met us in Chicago, September 11, 1879, and with the committee spent an entire day in the examination of our bills. Some doubt had been entertained by members of the committee as to the propriety or necessity of such an extent of detail in the executive management of the "Health Law", but Dr. Rauch very unqualifiedly advised their retention, for reasons which, to the committee, seemed sufficient and pertinent. The "Draft Regulating the Practice of Medicine" received equal consideration and was pronounced an efficient and well worded law.

Within a few days a paper entitled "The Regulation of Medical Practice by State Boards of Health, as exemplified by the execution of the law in Illinois, by H. A. Johnson, M. D. of Illinois," has fallen into our hands; and it was thought by parties interested in our work that this would, if properly circulated, prove of immense benefit in throwing light upon the general subject of such legislation, thus advancing the interests of our bills. Your chairman failing to procure copies sufficient for our purpose, and not having time to confer with other members of the committee, (and with the consent of the author) assumed the responsibility of having a reprint made of the paper, and ordered for our use two hundred and fifty copies.

During December last a committee from the Hahnamann Medical Society of this State met and prepared a "Draft of a Health Law and Medical Practice Act" in one bill. The chairman of your committee was invited to meet that committee and was asked whether our committee would co-operate with theirs in the prosecution of the sanitary work; saying that they had in the main adopted our bill. I replied that so far as I was individually concerned I thought it the duty of every philanthropist to do all in his power for the good of the masses, and would say for myself (and I doubted not for my associates and this society) that we would work side by side in any movement which would give us an efficient sanitation and an operative medical practice act. I am happy to say that my associates concur in favoring this consolidation. In furtherance of this movement the two committees had a joint conference in this city January 28, 1880, which has resulted in the concurrence of the two commit-

tees as to the bills to be presented to the General Assembly and adding to our prospects of success another element of influence.

Other medical organizations within the State (perhaps overlooking, or not being advised of the action of this Society in this matter at its last session) have also moved in this work, and one at least has prepared a draft of a health law, a copy of which has been sent to different quarters of the State, and whose committee asked the co-operation of the profession for its enactment; but since this society has initiated the movement, and inasmuch as those gentlemen have a mutual interest in our State organization, it is hoped that they may deem it a pleasure to use their influence with us in this more general and widely extended effort of sanitary progress, believing that such co-operation will best secure the desired results.

The resolution creating this committee assigned to them the duty of carrying on this work to completion, and they have thus far endeavored to faithfully perform their trust. Further details are arranged for future action, and while your committee are doing all they can to carry out your order, and with encouraging prospects of success, we ask of you organic and individual support and co-operation, that our past and prospective labors may be crowned with ultimate success.''

Respectfully submitted, W. S. Robertson, G. M. Staples, S. B. Thrall, Committee.

The following is the law relating to Public Health in force in Iowa, as compiled from the Code of Iowa, 1873.

''Sec. 4037. p. 629. If any person fraudulently adulterate, for the purpose of sale, any drugs or medicine in such manner as to lessen the efficiency or change the operation of such drug or medicine, or to make them injurious to health, or sell them knowing that they are thus adulterated, he shall be punished by imprisonment in the county jail not exceeding one year, or by fine not exceeding five hundred dollars; and such drugs and medicines shall be forfeited and destroyed.''

''Sec. 4038. If any apothecary, druggist, or other person sell and deliver any arsenic, corrosive sublimate, prussic acid, or any poisonous liquid or substance, without having the word ''poison'' and the true name thereof written or printed upon a label attached to the vial, box or parcel containing the same, he shall be punished by imprisonment in the county jail not more than thirty days, or by fine not exceeding one hundred dollars. Any person who may dispose of at retail any poisonous substance or liquid to any one for the purpose is required to enter in a book, to be kept by such apothecary, druggist, or other person so disposing, the name of the poison, when bought, by whom, and for what purpose; and if the person who calls for such poison is not personally known to the vendor, then such person shall be identified by some one known to the vendor, whose name shall also be entered in such book. Any failure to

comply with the requirements of this provision shall subject the party so failing to imprisonment in the county jail, not more than thirty days, or to a fine not exceeding one hundred dollars.''

''Sec. 4039. If any person inoculate himself or any other person, or suffer himself to be inoculated with the smallpox, within this State, or come within this State with the intent to cause the prevalence or spread of this infectious disease, he shall be punished by imprisonment in the penitentiary not more than three years, or by fine not exceeding one thousand dollars and imprisonment in the county jail not exceeding one year.''

Up to this time the foregoing was all on our statute books relating to public health in the state of Iowa, and it was through the persistent efforts of the state and auxiliary societies that the profession finally succeeded in getting a bill through the Legislature.

On the 26th day of March, 1880, a bill creating the Iowa State Board of Health was approved by the Governor, and on the 23rd day of April, 1880, the Governor commissioned the following persons to constitute the State Board of Health:—

William S. Robertson, M. D., Muscatine.
Phillip W. Lewellen, M. D., Clarinda.
Wilmot H. Dickinson, M. D., Des Moines.
Henry H. Clark, M. D., McGregor.
Justin M. Hull, M. D., Lake Mills.
Ephraim M. Reynolds, M. D., Centerville.
George F. Roberts, M. D., Waterloo.
James L. Loring, Civil Engineer, Dallas Center.
John F. McJunkin, Attorney General, Washington.

The first meeting of the State Board was held at the State-house in Des Moines, May 5, 1880. The following members were present: Dr. W. S. Robertson, Dr. P. W. Lewellen, Dr. W. H. Dickinson, Dr. H. H. Clarke, Dr. J. M. Hull, Dr. E. M. Reynolds, Dr. G. F. Roberts, J. F. McJunkin, Attorney-General, and James L. Loring, Civil Engineer.

A temporary organization was perfected by the election of Dr. Lewellen, Chairman, and Dr. Roberts, Secretary, when the following persons were elected permanent officers:

President—W. S. Robertson, M. D.
Vice President, pro tem—W. H. Dickinson, M. D.
Secretary—L. F. Andrews.

In June 1881, Mr. J. F. McJunkin was succeeded by Smith McPherson, Attorney-General, and on May 5th, 1881, L. F. Andrews was succeeded by Dr. J. F. Farquarson of Davenport.

A Short History of the State Board of Health.

GUILFORD H. SUMNER, M. D., Secretary-Executive Officer.
Des Moines.

The first knowledge which I have relative to the formation of The State Board of Health, I learned through Dr. W. S. Robertson, while I was a student in the Medical Department of the Iowa State University. Dr. W. S. Robertson was the first President with whom I had any acquaintance. The next President with whom I had a familiar acquaintance was my preceptor, Dr. J. C. Shrader, then a professor in the Medical Department of the State University, as was Dr. W. S. Robertson. These two men were giants in their work, both as practitioners and as members of the State Board of Health.

I learned much of these men and their work by my intimate association with them. Both were personal friends of mine in my student life in the Medical Department of the State University, and both helped me wonderfully in my work when I began the practice of medicine. I mention these men more particularly because of my intimate association with them as a practitioner of medicine and a health officer.

I cannot enter into details by mentioning all of the different members connected with the State Board of Health. but I cannot pass the name of Dr. J. F. Kennedy, who for many years was the efficient Secretary of the Iowa State Board of Health. Dr. Kennedy was a scholar in every sense of the word, both as a literary man and a medical practitioner. I had an intimate association with Dr. Kennedy during my early service as Health Officer of the city of Waterloo. In my visits to the State Board of Health office I always obtained excellent advice from Dr. Kennedy and he was always genial and pleasant to meet. Dr. Robertson, Dr. Shrader, and Dr. Kennedy were all good physicians and all served in the Union army and were good soldiers. I would gladly go into detail and mention all of the names of men connected with the State Board of Health in the past, but it would make this article too lengthy and would be only full of details without furnishing very much information.

My first knowledge of the formation of the State Board of Health leads me to begin with the year 1880. At that time the State Board of Health was organized, and the membership of the Board was as follows, and continued until the 35th General Assembly.

There were seven physicians, and a civil engineer, appointed by the Governor, one being appointed each year and each one serving seven years. The Attorney-General and the State Veterinarian were also members of the Board. Among the physicians of the Board at that time there were four Regulars, two Homeopaths, and one Eclectic. For the purpose of proper representation, the State was divided into eight health districts.

Under this arrangement each district remained unrepresnted

for one year after its representative had served his seven year term, and so it was that there were eight health districts and only seven physicians on the Board at any one time. It was intended that the same sectarian division of the Board members should be maintained, and accordingly each new appointee was selected from the same school of practice as the last retiring member.

The Secretary was elected by the Board and was not a member of the Board. The Secretary had no executive authority whatever and had no power to do anything under the law, except he was directed by the State Board of Health in session.

The annual appropriation for State Board of Health purposes has always been the same and is the same to-day. The annual appropriation for State Board of Health work was $5,000 and out of this was paid the salary of the Secretary, as it is to-day. All office and general expenses had to be paid with this appropriation. The Board members received only their actual expenses when attending meetings or serving the State in an official capacity. Of course the physician members of the State Board of Health constituted the State Board of Medical Examiners, for the purpose of conducting examinations for physicians who desired to come into Iowa to practice medicine. These physicians received, each of them, the sum of $8 per day and expenses for such work, and this plan existed up to the change of the law, which was made by the 35th General Assembly.

The functions of the Board were numerous and varied. The work of the Board was to exercise general supervision over the health matters of the state, to make regulations governing the management of dangerous diseases and to make suggestions relative to health regulations.

As medicine advanced and laboratory experiments were made, it became evident that it was necessary in making diagnoses of certain diseases, such as diphtheria, and typhoid fever, that a public health laboratory be established, and this was done by the legislature which established a State Board of Health Laboratory in one of the University buildings, and the law made the Professor of Bacteriology and Pathology the director of the same. Dr. Henry Albert, the efficient Professor of Bacteriology and Pathology of the College of Medicine at Iowa City, has held the position since its establishment. In this laboratory were made and are made at the present time bacteriological examinations for the diagnosis of diphtheria, typhoid fever, tuberculosis, hydrophobia and other diseases; patients who have been bitten by rabid animals are treated here by the Pasteur method, free of charge.

All examinations in the State Board of Health laboratory at Iowa City are made free to the physicians, cities and others of the State. We will not attempt to give the many thousands of examinations which have been made during the past years in this laboratory. The annual appropriation for the support of this laboratory is $6,000 a year, which is used to pay the expenses of the laboratory.

There is connected with the State Board of Health a Vital Statistics Deartment, of which the Secretary of the Board is the Registrar. For this service the Secretary receives no compensation. There are other departments connected with the State Board of Health, of which the Secretary of the State Board of Health is the Secretary of each of these departments, in the same manner as he is the Registrar of Vital Statistics. The departments are and have been for years, State Board of Medical Examiners, State Board of Embalmers Examiners, State Board of Nurses Examiners, and State Board of Optometry Examiners. All of these departments are separate and distinct from the State Board of Health and are not supported by any appropriations from the State. All of these last mentioned are supported by fees, and the law provides that no money shall be expended in excess of the fees received. This was and is a wise provision of the law, since there could be no other method, as provided by law, for paying expenses except the resources which were created by the collection of fees which was provided for by law. It will therefore be seen that if any money was expended beyond the fees collected, then such bills could not be paid, for the law provided no funds except the fees. These fees collected were all paid into the State Treasurer and all accounts were itemized, certified, and verified, and audited before payment could be made. All accounts of whatsoever character since I came into this office have been audited by the Executive Council, composed of the Governor, Secretary of State, Auditor of State, and Treasurer of State, and all fees were handled and are being handled in the same manner as appropriations made by the State legislature.

It is here to be observed by any one acquainted with the law that all appropriations and fees have been handled exactly alike, and at no time during my term as Secretary have I been allowed the expenditure of any money beyond the appropriations or the fees collected, and I mean by this that the members of the Executive Council were made acquainted at all times with the conditions existing in the State Board of Health office in order that there might be a wise expenditure of money. All bills are audited by the Executive Council, hence there is no opportunity in the State Board of Health Office to use money in any other than a legitimate way.

All matters pertaining to the transportation and disposition of dead bodies are under the supervision of the Board of Health, and besides issuing certificates to physicians, as a Board of Medical Examiners, the Board of Health is charged with the examination and licensing of Embalmers. The Secretary of the Board and two Board members together with two licensed embalmers comprise the Embalmers Examining Board, which Board conducts all examinations for embalmers and issues to them licenses.

The Secretary and one Board member, appointed by the Governor, together with three registered Optometrists, serve as the Opto-

The Present State Board of Health, 1914.

metry Examining Board, which Board conduct all examinations relating to the fitting and adjusting of eye glasses.

The Secretary and two Board members, together with two registered nurses, comprise the Nurses Examining Board, for the registration of trained nurses. In addition the Board of Health establishes the standard of Nurses' Training Schools and gives official recognition to such schools as meet the requirements. All Nurses' certificates are issued by the State Board of Health, after examinations have been held.

The Board inspects all Maternity Homes in the State and grants permits to such as meet the requirements. The Board also maintains and keeps a supervision over these Maternity Homes, for the purpose of having them all conducted in accordance with the Maternity Home law.

The Board makes rules and regulations regarding the inspection of petroleum products and prescribes apparatus for testing and using these products. The oil inspectors, however, are appointed and removed by the Governor.

It must be observed that the Iowa State Board of Health covers a very wide and important field, and it is to be observed that a large part of the work is very technical and important, and as has been said, the physicians of the Board of Health are charged with all medical examinations and it is the duty of the Board to control and regulate the practice of medicine in the State, to examine all applicants for license to practice, to revoke licenses for cause, and to establish a standard for medical schools.

Under the law the Board of Examiners is allowed to establish reciprocal relations with Boards of other States, and to license applicants to practice in Iowa without examination, provided they have been licensed in the State from which they come. This privilege may only be granted to applicants coming from states which recognize Iowa licenses in like manner. The establishing of reciprocity with other states is a matter of some difficulty and a great amount of detail, and depends upon the maintaining of the high standard of requirements of the Iowa Board.

Iowa physicians desiring to change their locations may enter the following states without submitting to an examination, in the following manner:

The Iowa State Board of Medical Examiners (Physicians of the State Board of Health) issues two forms of reciprocal certificates; **Reciprocity-A** and **Reciprocity-B.**

Reciprocity "A".

Upon the basis of a written examination in all the subjects required by this Board by a State Examining Board having reciprocal relations with the Iowa Board; provided, the applicant was a graduate of a medical college recognized by the Iowa State Board of Medical Examiners as in good standing upon the date of said graduation,

and that the general average attained by the applicant at said examination was not below 75 per cent.

The Iowa Board places no limitations as to date of examination, but if the state issuing the certificate upon which reciprocity is asked limits reciprocal agreements to certificates issued upon the examination held subsequent to a special date, the same limitation shall be imposed upon its licentiates applying for recognition by the Iowa Board.

The following states have been admitted under reciprocity-A only:

Colorado, Delaware, New Hampshire, New Jersey, Pennsylvania, Texas, Virginia, Wyoming.

Reciprocity "B".

Upon a certificate issued by another state holding reciprocal relations with Iowa upon the basis of a diploma without examination; provided, that the diploma was issued prior to January 1, 1899, by a medical college entitled to recognition by the Iowa State Board of Medical Examiners on the date said diploma was issued.

The following states have been admitted under both Reciprocity-A and Reciprocity-B:

Georgia, Kansas, Kentucky, Maine, Maryland, Wisconsin, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, Nevada, New Mexico, North Carolina, Ohio, Utah, West Virginia.

Graduates of Osteopathic Schools are examined by the Board of Medical Examiners in Anatomy, Physiology, Chemistry, Histology, Pathology, Gynecology and Obstetrics, at the same time, in the same manner, and upon the same questions, as graduates of medical colleges and are licensed by the Board upon attaining a general average of 75 per cent. or above.

A very important department of the State Board of Health is the Antitoxin Department, which has saved not only hundreds of lives, but has saved to the people of Iowa many thousands of dollars. The Board realizing that the high price of diphtheria antitoxin ($7.50 a dose) was preventing its use and thus favoring the spread of diphtheria, made arrangements with the Dr. H. M. Alexander & Co., of Marietta, Pa., to furnish antitoxin of the highest quality to the Board for $2.25 a dose instead of $7.50. This is done through local distributors, appointed by the Board. There are 250 stations scattered all over Iowa, where State Board of Health Antitoxin can be precured at lowest rates. Remittances are made by the distributors to the H. M. Alexander & Co., and the Board is required to keep things in order and to maintain a central depot and supply emergency demand. The state need only to provide an extra clerk to keep this plan going.

In order that the people of Iowa may know something of this one department, I desire to embody in this article the following statement of fact:

Diphtheria.

Amount of money saved to the people of Iowa by the Iowa State Board of Health, through its antitoxin stations, which are 250 in number, and where Iowa State Board of Health Antitoxin has been distributed during the past four years. This not only represents money saved, to the people of Iowa, but represents hundreds of lives saved from the destructive disease, **Diphtheria.**

Diphtheria Antitoxin.

Number of Packages Used in Four Years	**8,258**
Amount Actually Paid for Same	**$11,526.75**
Cost if Furnished at Regular Prices	**$38,422.50**
Amount Saved to the People Who Used Iowa State Board of Health Antitoxin	**$26,895.75**
Number of Packages Sent Out on Emergency Orders from State Board of Health Office	**3,415**
Amount Paid for Same	**$4,555.35**
Amount Saved to the People on Antitoxin Sent from State Board of Health Office on Emergency Orders	**$10,629.15**

The Antitoxin furnished by the Iowa State Board of Health, was prepared under United States government license issued to the Dr. H. M. Alexander & Co., Marietta, Pa.

The above figures are taken directly from the books and show the amount actually saved to the people of Iowa.

It should be observed in this connection that the money saved to the people of Iowa by the Iowa State Board of Health has not only been a financial saving but hundreds of lives have been saved whose value and usefulness to our state and people cannot be measured with a money value.

One of the purposes of the State Board of Health as stated in the Code is to disseminate knowledge of hygiene and to suggest further necessary legislation. The Board has tried to do at all times and has ever been ready and anxious to help the legislature in promoting the health and happiness of the people.

We have thus outlined in a brief way some of the history and a part of the work which the State Board of Health has tried to do. We now come to the 35th General Assembly, which enacted a new Section of the Board of Health law. Section 2564 of the Code Supplement was repealed and Chapter 207, Acts of the 35th General Assembly, was enacted in lieu thereof. This new law of the 35th G. A. obliterated the Health District plan, and provided that the Governor, Secretary of State, Auditor of State, and Treasurer of State should all become Ex-Officio Members of the State Board of Health, and all funds of whatsoever kind or character which had been made heretofore to the State Board of Health, or which shall be made hereafter were to be expended under the supervision and sanction of the Executive Council, and not under the supervision of the State Board of

Health, as heretofore. This new law makes the Governor, the Secretary of State, and the Auditor of State to be an appointing Board, and the Secretary of the Executive Council is the Secretary thereof. This Appointing Board appoints five members of the Boards, composed of a Sanitary Engineer and four physicians. Of the five members who are thus appointed not more than three of whom shall belong to the same political party, and of the four physicians not more than two of whom shall belong to the same school of practice. It will thus be seen that the State Board of Health is not only a non-partisan Board but the Board is not predominated by any particular school of medicine, as the four physicians now connected with the State Board of Health as members are composed as follows: two physicians belong to the regular school of practice; one is a homeopathic member and one is an eclectic member, thus all of the schools of medicine are represented as provided by law.

Of the five members composing the Board, three of whom are Republicans and two are Democrats. The office has been and is being conducted on a purely non-partisan basis. The employees and all connected with the office feel it their duty to work for the whole state and all of the people all of the time. No politics whatever is found in the State Board of Health office, and there is not a political appointment connected with the office or its service in any manner whatever. All parties and all creeds and all colors are treated exactly alike when transacting business with the State Board of Health.

The new plan of organization we believe to be the most perfect of any with which we are acquainted, for the reason that when the Board of Health is not in session the Secretary, by law, is the State Health Commissioner and the Executive Officer of the Board, and full power to act in the same manner as the Board would have when in session. This plan allows the Governor, Secretary of State, Auditor of State, Treasurer of State, the physicians of the Board, and the Sanitary Engineer to all come together and outline public health work, then when the Board adjourns, the Secretary becomes the Executive Officer of the Board.

Another advantage is given in the new law over the old law that an efficient member may be re-appointed, which could not have been done under the old law. A member can also be appointed from any part of the State which may be thought best by the Board of Appointment. This very efficient law was prepared by the committees on public health and was introduced in the legislature as a committee bill. After it has been discussed thoroughly in both committees, the House of Representatives and the Senate, for a number of weeks, the bill was almost unanimously passed by the legislature.

Under this new law the Sanitary Engineer and the Secretary have been working together harmoniously to bring about better conditions in the State relative to a pure water supply and the proper disposal of sewage and night-soil, and during the last two Legisla-

tures bills have been introduced in the Legislature asking for help in the matter of the pollution of streams, and no city has been permitted, when putting in a new sewerage system ,to pass its sewage into any stream without first making arrangements for purifying the sewage before being allowed to pass into any stream. A large number of the cities and towns of Iowa were permitted to empty their sewage into the streams many years ago, and these systems have been enlarged until more sewage has been emptied into our streams, and the State Board of Health had not the means at hand, neither had it the help to make a complete sanitary survey of the state; but a large number of cities and towns have been surveyed and recommendations have been made to these cities relative to the establishing of their water works systems and their sewerage systems. This has not been done so extensively as the Board has desired, but progress has been made, and a complete supervision has been in operation under this new law. Conferences have been held in the State Board of Health office at which the Governor and members of the Executive Council were present, and the Board feels that there has been a steady progress all along the line of public health work in Iowa.

Under the Board's direction, Bulletins have been issued on all of the various topics which have related to all of the contagious and infectious diseases and the means of preventing their spread. The Bulletins have treated specially such subjects as Smallpox; The Unsuspected but Dangerously Tuberculous Cow; Typhoid Fever—What Causes the Disease and How It May Be Prevented; Save the Babies; Infant Mortality—Vital Statistics; Clean Bakeries and Restaurant Kitchens—Death Lurks in Dirty Food; Preventive Medicine—The Plague and Leper Rat; The Public Drinking Cup; The Diphtheria Carrier; What the Mayor and City Council Can Do in the Prevention of Typhoid Fever; A Method of Preventing Smallpox, Pellagra; The Septic Disposal of Sewage and Night Soil; Conservation; Pneumonia; Tuberculosis; Rural Sanitation; Special Instructions Relating to Infantile Paralysis and Its Prevention; an Embalmers' Bulletin, with complete instructions relative to the proper disposal of the dead; Fumigation and Disinfection of Houses and Public Buildings, a complete guide for the use of Nurses and Hospitals.

The above are but a few of the very many topics that have been handled and literature sent out all over the state. Hundreds of extra copies have been distributed among the schools, and public health and hygiene have been taught.

The new Board feels that its work is but just begun and its purpose is to improve and improve, and improve. At the present time the State Board of Health is working for a better and a purer water supply and is working to that end. The Board has become thoroughly convinced that at the present time there is as much danger in a pollution of the soil by the use of the common privy as there is danger in the pollution of our streams.

It is to be seen with the present formation of the Board as outlined by the last Legislature that we are progressing along right lines, and it should be observed that the new Board has only been in operation, at this writing, just 17 months, and of course the people of our state certainly do not expect us to accomplish every thing in this short time. We hope that the coming Legislature and the people of our State will give the State Board of Health a sufficient appropriation in order that more work and better work may be done. In concluding this brief outline I wish to state that we have only spoken of the old Board under the district plan and the work of the new Board under the general or state plan, and it is believed that the present plan will work out more and better results in public health work in Iowa than any other plan which has ever been promulgated heretofore. What we need now is a larger appropriation, in order that the Board may expand and do more and better work.

With all funds which are appropriated for State Board of Health purposes in the hands of the Governor, Secretary of State, Auditor of State, and Treasurer of State, there can be no mistake made in any of the work, as the members of the Executive Council sit at the sessions of the State Board of Health and become thoroughly acquainted with the work of the Board. The Governor of the State keeps a very close tab on the work of all the departments, and we feel glad to consult with him, as the chief head of the State Government, relative to all of the work which the State Board of Health has done in the past and is now doing.

EDITORIAL NOTES.

A Government Report on the Friedmann Treatment.

In recent years there has probably been no announcement which attracted a more wide-spread attention in this country than did the announcement of the Friedmann treatment for tuberculosis. This was due to skilful handling of the publicity work in the daily press. The sensational newspaper reports of alleged improvement and cure of cases of tuberculosis following the use of the treatment, the reports of persons of high position in public life, of lay workers in tuberculosis, and even a few physicians who became enthusiastic supporters of Friedmann will be recalled by every one. When a note of warning was sounded by The Journal of the American Medical Association and others the assertion was made that Friedmann was being hindered in his great work. The fact is otherwise.

Immediately on the arrival of Dr. Friedmann in this country, the United States Public Health Service took up an investigation of the validity of the claims for the treatment. A board was appointed consisting of Surgeon John F. Anderson, the director of the Hygienic Laboratory, and Surgeon A. M. Stimson, to make a thorough study of the results of the use of the treatment. The report of this board has just appeared and its findings are a complete refutation of Friedmann's claims, not only for having developed a specific cure for tuberculosis, but also for the harmlessness of his treatment for man and animals. The board had an opportunity to observe the effect of the treatment in ninety-four cases of tuberculosis and was prepared to furnish many more for treatment and obser-

vation, but owing to Dr. Friedmann's delay and dilatoriness it was obliged to limit observations to the ninety-four cases.

The claims for the treatment were, that by means of injections of a living organism, harmless of itself, it was possible to cure cases of tuberculosis which had not advanced to that stage where death was imminent. From the way in which the claims were put forth and from the fact that successes only and not failures were reported in the public press, the reader of Friedmann's claims could assume that such results only were the rule. In other words it was claimed that a sovereign remedy for tuberculosis had been discovered. Investigation did not confirm the claims. On the contrary, it was found that the preparation used was not devoid of dangerous properties of itself, and still less so when injected into persons with tuberculosis. A favorable action on tuberculous processes by the treatment was not the rule.

The board made extensive studies of the organism used in the preparation of the vaccine, both by cultural methods and by animal inoculation. It was found that the injection of the organism in animals causes abscess formation in over 25 per cent. of the animals treated. Animals treated with the organism—rabbits and guinea-pigs—either before or subsequent to infection with virulent tubercle bacilli, developed as a rule an increased susceptibility to tuberculosis. The treatment did not show either curative or protective properties in monkeys against tuberculosis.

It is a matter for congratulation that this painstaking report from the Public Health Service has appeared; it is a pity that it could not have been given publicity at the time when consumptives were being so widely exploited; but scientific work of the kind done by the Public Health Service in this instance obviously requires a long period of time. It is a report that shows the absolutely flimsy evidence on which the Friedmann method for the treatment of tuberculosis was based. The evidence shows that the commercialization of the Friedmann cure was a grisly hoax on the unfortunate but ever hopeful consumptive.

Malpractice in Treatment of Gunshot Wound.

(Dailey vs. Shaffer (Mich.), 146 N. W. R. 192.)

The Supreme Court of Michigan affirms a judgment against the defendant for malpractice while treating the plaintiff's husband for a gunshot wound in the calf of his right leg. The court says that the shot tore its way clear through the thick part of the calf, leaving a hole large enough to insert two fingers. The man was removed to his house, and the defendant arrived within a few minutes thereafter and took charge of the case. The wound was partially cleaned and some of the foreign matter removed, after which antiseptic tablets were administhered, as the patient was suffering from shock and the loss of blood. After giving members of the family some instructions as to the treatment during his absence, he left at about 11 a. m., after having been there an hour, and returned at 3 p. m., to find the patient somewhat improved. At this time, he remained about fifteen minutes. On the first visit, the defendant made some investigation to learn the extent of the injury, but did not go far enough with it to learn whether any of the arteries had been severed or punctured. On the second visit he made no investigation in this respect. At 7 p. m. it was thought that the patient was bleeding too freely, and repeated attempts were made to reach the defendant over the phone, but without avail. At 4 a. m. next day the condition became alarming, and a neighbor was dispatched for the defendant, but before he arrived the patient was dead. A post-mortem examination disclosed the facts that the posterior tibial artery was cut off and the popliteal artery was partially divided, and the ex-

perts gave it as their opinion that the patient died from arterial hemorrhage. The negligence with which the defendant was charged was: First, a failure to ligate the severed and injured arteries; second, in failing to visit and attend to the patient as often and as much as he should have done. The defendant admitted that he did not inform himself as to whether the arteries were cut off or punctured, and it was shown by expert witnesses that he should have done so; that he should have found the bleeding point and stopped the hemorrhage. After he determined what course to pursue without this information he was in no position, as a matter of law, to invoke the protection of the rule in emergency cases, but it was properly submitted to the jury to determine whether he did what was necessary to bring his treatment within the rule in emergency cases, that if a physician exercises his best judgment as to the treatment, he is not liable for negligence for an error, of judgment in following one treatment rather than another. The other ground of complaint, as to whether the defendant gave the patient the attention and care which the case demanded, was likewise one for the jury.

Lead Poisoning in Smelters and Refineries.

The fourth number of the series on industrial accidents and hygiene has been issued by the Bureau of Labor Statistics. It deals with lead poisoning in the smelting and refining of lead. This important industry employs in twenty plants visited by an investigator about 7,500 men, all of whom are exposed to the fumes or dust of lead. The report considers the dangers inherent in the various metallurgic processes, the precautions available to lessen these dangers, the actual sanitary conditions in the different plants, the extent of lead poisoning during the year 1913 among these 7,500 men, and the medical care furnished them. Of late years there has been a notable improvement in smelting and refining plants, due largely to the concentration of operations in a few large establishments and the consequent abandonment of old, crowded buildings. There is now probably no plant in the United States in which some effort is not made to lessen the danger of lead poinsoning, as well as to prevent accidents. These efforts, however, are perfunctory in some, and in none are they sufficient. There is not one plant in which no fumes are allowed to escape, not one which is as free from dust as it might be. The result of this neglect is found in the records of lead poinsoning among the men. While Great Britain had a rate of only 1.8 per hundred men employed in a single year in this industry, the rate in this country was something over 22 per hundred.

The investigator takes issue with those who believe that the men are responsible for their own ill health, who maintain that it is lack of personal cleanliness that causes lead poisoning in smelters. It is dust that is the dangerous element, and under dust is included the excessively fine suspension of lead salts that make up the fumes from heated lead and lead ores.

To comment on the extreme importance of practical research of this character is superfluous, says The Journal of the American Medical Association. Since its establishment, this bureau has often displayed its efficiency in meeting the need which created it. Further development may be awaited with the confident hope that conditions will continue to improve.

The Quacks' Horoscope.

"If there were anything in astrology," says The Journal of the American Medical Association, "we should have read something like this:

'October, 1914: This is a month in which Saturn rules strongly in favor of the public health, and while this configuration prevails, it augers ill for quacks and charlatans. The horoscope of the medical faker presages danger, and those that are prudent will seek the cyclone cellar.'

"On October 7 'Professor' Samuels, the Wichita faker, was found guilty in the federal courts on eleven counts; the maximum penalty for each count is a fine of a thousand dollars and five years in prison. Samuels amassed wealth by swindling the sick and suffering by selling a mixture of sugar, salt and water as a cure for practically all diseases. On Oct. 22, 1914, Orlando Edgar Miller, late of Chicago and Denver, was sentenced to prison in London after being convicted of having caused the death of a woman by administering a drug while she was a patient in an alleged sanitarium he conducted. Miller will be remembered as the quack who exploited the so-called 'International Institute for the Treatment of Tuberculosis in Chicago. The Journal investigated Miller and his 'institute'; showed up the quack's record; proved that over 80 per cent of his victims died under treatment and in general turned the search-light on the scheme. On Oct. 21, 1914, Dr. Richard C. Flower was arrested in Canada on a charge of grand larceny. Flower has been a fugitive from justice for some years and is said to have swindled the public out of more than a million dollars. He founded the 'R. C. Flower Medicine Company,' a mail-order medical fraud whose president was B. O. Flower, president and one of the founders of the 'National League for Medical Freedom.' Altogether, the present month has proved a bad one for medical fakers."

Physician Had to Pay Damages For Visiting A Patient Without Her Consent.

An unusual case has occurred in which damages were claimed from a medical man for "assault." A woman engaged in domestic service fell down stairs and injured herself. The insurance company in which her employer was a policy-holder sent a physician to examine her. She received no notice of this visit and was asleep in bed when he came. According to the evidence he roughly pushed past her mistress who opened the door, awoke and examined the woman, and tore off a plaster and strap which her own physician had applied, causing much pain. The physician gave a different account. He said that the woman's mistress invited him to the house, and that he removed the plaster at the plaintiff's request. He had made no appointment to visit her; that was a common thing; 75 per cent of such cases were done under the same terms. In reply to the judge's question, "you suggest that doctors visit patients without first obtaining their consent?" he replied: "It is done in these cases." To this the judge retorted that the defendant had set up a new idea as to the rights of physicians, from his knowledge of the profession, he thought was a libel on them. Damages of $125 were awarded to the woman.—(Journal of the Medical Society of New Jersey.)

Chiropractors For State Board Must Have Complied With Medical Practice Act.

(Green et al. vs. Hodges, Governor (Kan.)), 138 Pac. R. 605.)

The Supreme Court of Kansas holds unanimously that Chapter 291 of the laws of that state of 1913, relating to the practice of chiropractic examiners, does not require the governor to appoint on that board persons who have not complied with the statutes regulating the practice of medicine and surgery.

The plaintiffs asked that the governor be required by mandamus to appoint the board. The first section of the act creates a state board of chiropractic examiners, to be composed of "one ordained minister, one

school teacher, and three practicing chiropractors of integrity and ability, who shall be residents of the state of Kansas and shall have practiced chiropractic continually in the state of Kansas for a period of not less than two years." The governor, in giving the matter consideration, asked and obtained the opinion of the attorney-general, in which that officer advised that there was such ambiguity in the statute that action by the governor ought not to be taken.—(Journal of the American Medical Association.)

The Old Dominion Journal of Medicine and Surgery speaks hopefully of the amalgamation of the University of Virginia Medical Department and the Medical College of Virginia. The Medical College of Virginia recently absorbed the Charlotte Medical School and now with the prospect of uniting the University Medical Department and the Medical College of Virginia, the friends of both schools believe that the result will be the formation of the strongest medical school in the South. The Journal says in its closing paragraphs:—

"Richmond has become a medical center of wide repute and is clinically, socially, and educationally, a most desirable city in which to live, and offers to prospective students not only a medical education of the highest standard, but environments which are attractive and conducive to their uplift."

To Make People Sit Straight.

The New York Medical Journal comments in a recent editorial on a society recently organized for the purpose of making people to sit up straight. Attention is called to the numerous cases of lordosis and accompanying kyphosis which are due to many causes. It is admitted that bad positions compensatory to hereditary anatomical defects, cannot be corrected by exercise but acquired bad positions can be, and the field of work of this society is a broad one extending to the mitigation of inherited faults to reilief of fatigue, and the suppression of the manufacture of uncomfortable furniture.

Medical College Site Donated.

Twenty acres of land in South Portland, valued at $100,000 have been donated as a site for the campus and buildings of the Medical School of the University of Portland, by the Oregon-Washington Railroad and Navigation Company, the terms stipulating that the site may be used for public purposes, such as a hospital or institutions for the furtherance of scientific research and investigation, and teaching along such lines.—The Journal of the American Medical Association.)

BOOK REVIEWS.

The Clinics of John B. Murphy, M. D. at Mercy Hospital, Chicago, Published Bi-Monthly by W. B. Saunders Company, Philadelphia and London. Price Per Year, Paper $8.00, Cloth $12.00.

We have before us numbers 4 and 5, of volume 3, number 4 of 254 pages and 65 illustrations and number 5 of 190 pages, 61 illustrations.

Number 4 has a very interesting and able article on Ileus, its varieties, symptoms; management with illustrative cases. No one can read this article without feeling refreshed and greatly benefitted in his knowledge of the subject so clearly and concisely presented. At the meeting of the International Congress at Mercy Hospital April 21, 1914 when so many of the great surgeons of Europe met in friendly convention to discuss the great problems in surgery and who are now engaged in deadly strife from which many may never return; this clinic at which Dr. Murphy presented

a series of ortho-plastic operations of great interest and importance, must be to him a memory of pleasure in presenting to his foreign friends one of the triumphs of American surgery; of sadness that so many in the prime of life may be lost to the great European profession and to the world.

This number is full of interesting things of immense value to the general surgeon and appeals to us very strongly. We regret that we cannot review them all.

Number 5 for October is equally interesting in many respects. The first is a diagnostic talk on the symptoms and signs of ureteral stone. Another is a very interesting case of Intrathoracic Sarcoma, interesting from a pathalogic and diagnostic point of view, but altogether beyond the reach of surgical aid. Another from the same point of view on the Diagnosis of Meningitis and the differentiation of its varieties by Dr. Mix and Dr. Murphy.

In this number its found a rather extended series of fractures of the ankle, a series of so much interest to the general surgeon, which Dr. Murphy disposes of it in his usual illuminating way. It is a very much to the credit of the profession that so many are reading these clinics and so much to their advantage in the management of cases which have been a source of sorrow in the results.

Local Anesthesia, Its Scientific Basis and Practical Use, by Professor Heinrich Braun, Ober Medizinalrat and Director of the Kol Hospital at Zwicksen, Germany. Translated and Edited by Percy Shields, M. M. A. S. S., Cincinnati, Ohio, from the Third Revised German Edition with 215 Illustrations in Black and Colors, Lea & Febiger, Philadelphia and New York, 1914.

The translator announces as his object in plocing Professor Braun's "work at the command of the English speaking surgical world is to systematize the vague, erratic and unsatisfactory efforts which have been made in the field of local anesthesia for many years by offering a logical procedure based upon scinetific facts and having an exact and undeviating technique."

The distinguished place which Professor Braun holds in the surgical world at once invites attention to the subject of which his work treats, especially as he has been a zealous worker in developing efficient methods. The first chapter takes up the history of local anesthesia to the discovery of cocain. This is interesting as showing the feeling that has existed always to find something to mitigate pain in surgical procedures, and since the discovery of general anesthesia to escape the necessity of administering it in minor operations or in conditions which appeared to make general anesthesia undesirable. A chapter is devoted to sensation and pain and anesthesia and anesthetics from a physiological point of view, also a chapter on pain relieving, action of nerve compression and anemia from an experimental point of view. This continued on through chapters four and five under the head of "anesthesia by means of cold and the effects of osmotic tension of watery solutions injected for purposes of local anesthesia." Chapter six considers the effects of these solutions when injected into the tissues. The two last chapters also deal with physiology and experimental facts. Beginning with Chapter seven, local anesthetic agents are considered. The first local anesthetic agent is cocain; its history, physiological action, character, and mechanism of local poisoning; the effects of more concentrated solutions and diluted solutions, general cocain poisoning, etc. The author points out how to avoid the danger of cocain poisoning by considering the preceding observations and by experiments on human beings. Caution is given not to accept all that authors

say as to a safe dose and points out the necessity of using very dilute solutions. A very extended argument is offered in this direction which should be very carefully read by those who use cocain solutions for injection in local anesthesia. Tropacocain, eucain and several other substances belonging to this group are considered.

The orthoform group of anesthetics are taken up. Particular attention is given to novocain.

Chapter eight deals with aids to local anesthesia. The influence of the vitality of the tissues upon the local and toxic action of local anesthetic agents. Chapter nine, the various methods of using local anesthetic drugs. Commencing with chapter ten and including the remainder of the book—220 pages—will be found a detailed account of the value indications and general technic of local anesthetics.

The interest which is generally felt in the profession touching local anesthesia will create a demand for carefully prepared literature on the subject and we feel assured that this with a few other works recently placed on the market will be welcomed.

A Manual of Practical Hygiene. For Students, Physicians and Health Officers. By Charles Harrington, M. D., late Professor of Hygiene in the Medical School of Harvard University. Fifth Edition, Revised and Enlarged by Mark W. Richardson, M. D., Secretary of the State Board of Health of Massachusetts in Collaboration with W. H. Clark, Chief Chemist, X. H. Goodnough, Chief Engineer, William Hanson, M. D., Assistant to the Secretary, Herman C. Lythgoe, Chief Analyst of Food and Drug Department, Officers of the State Board of Health and George H. Martin, formerly Secretary of the State Board of Education of Massachusetts. Octavo 933 pages with 125 engravings and 24 plates in colors and monchrone. Cloth $5.00 net. Lea & Febiger, Philadelphia and New York, 1914.

This is one of the most interesting and useful books we have seen. Every health officer should have a copy on his desk for reference. The first section is devoted as one might suppose, to foods. The plan presented is to consider food composition, food value, poisoning by foods, and the dissemination of disease by food; particular attention is given to milk, methods of adulteration and the means of detection. In relation to the dissemination of typhoid fever by milk, some interesting facts are reported. "Of the 179 outbreaks of typhoid fever noted by Trask, 107 occurred in the United States, 43 in Great Britain, 23 in Continental Europe, 3 in Australia, 1 in New Zealand, and 2 in Canada."

Certain objections are offered to the Pasteurization of milk for bottle fed infants, and it should not be used if a clean and wholesome milk can be secured, but if the supply is uncertain, the objection is less than the danger of transmitting disease.

The section on foods includes 288 pages. Air and soil, 100 pages more.

Water is so important a factor in spreading disease that 100 pages are devoted to the study of the conditions of contamination, methods of detection, precautions, the avoiding of the useless things which sometimes gives a false sense of security, and emphasize the things that ought to be carefully considered. The disposal of sewerage and garbage receive a fair consideration. Heating, lighting, ventilation, and plumbing are treated of in chapter seven, and chapter eight to disinfectants and disinfection. The remaining 300 pages are given to personal hygiene, hygiene of occupations, medical inspection of schools, military hygiene, infection susceptibility, and immunity, vital statistics, etc.

It is impossible to do more than mention the subjects treated of in this valuable contribution by men of the highest standing in the actual

work of sanitary scinece. The book is opportune in coming to us at a time when we are struggling with the problems of sanitation, and we feel quite sure the profession will welcome it and draw the attention of non-professional workers to its helpfulness.

Sixty-six Years of Medical Legislation. By Frederick R. Green, Secretary Council on Health and Public Instruction, Public Health Series.

This pamphlet of 26 pages gives us an account of the growth and development of health legislation in the United Stated during this period. When we take into consideration the fact that legislation of this kind must emanate from the general public we feel that a great deal has been accomplished. The reason for the slow development of matters which come so close to the individual is the personal nature of the undertaking. The individual man uneducated, thinks he sees an effort to interfere with personal liberty and until his mind is enlightened as to the true purpose, is inclined to resent it or at least remain indifferent. The "business" man insists that there is "nothing in it." It produces no profit, and he is likewise indifferent. In older countries with a more centralized form of government a paternal spirit of responsibility makes the laws and insists on the general public obeying them whether the public is educated to the importance of them or not. We are often humiliatd on seeing how far ahead of us are most European countries in regard to health matters.

Dr. Green tells us that at the time of the organization of the American Medical Association in 1847 not a single state in the Union had a law providing for a State Board of Health or for a State Health Officer.

The first Board of Health was created in Massachusetts in 1869 and in California in 1870 and by all the states at various periods and of various degrees of efficiency. It is now apparent that the efficiency of a State Board of Health must be greatly influenced by the conditions of Medical Education in the state. One of the first undertakings of the American Medical Association was the appointment of a committee on Medical Education, but it was not until about 10 years ago that anything material was accomplished. Four years before, the Council of Medical Education had been organized, but it required four or five years of zealous work to bring about perceptible results. Prior to 1846 medical schools had furnished conscientiously the best medical training they could afford, but it began to be clearly seen that the commercial spirit was creeping into the schools and it was fees that counted most. The American Medical Association with its committees could not halt commercialism, and medical schools multiplied and continued to do so until the spirit of rightfulness which was slowly ripening in the professional and lay mind under the leadership of the Council brought the Era of Commercial Medical Education to a close. We have now reached a period when medical education and health legislation go hand in hand.

We have presented an outline of Dr. Green's pamphlet which is worth one's time to read.

Report of the Committee on Inquiry into the Departments of Health, Charities, and Bellevue and Allied Hospitals. Section VII., Care of Out Patients.

These reports continue to show the necessity of a reorganization of many of our hospitals. They show that very many hospitals are not efficient and are not properly performing the duties assigned to them. Of 1,000 cases that came to Gouveneur Out Patient Department from the registers of the Children's, General Medical, Gynecological, and Nose, Throat and Ear Clinics, several days at intervals during a period covering three months, were spent in observing the conditions of the dispensary

itself. In many instances, no attempt was made to examine the patients, but only prescribe some medication on the basis of their reply to the Doctor's question, "What's the matter with you?" In 14.1 per cent of the cases the patients when questioned in their homes, stated that no physical examination was given them. The greatest percentage was in the general medical clinic where 22.6 per cent of the cases had not been examined. In the gynecological clinic, 16.3 per cent of the patients were not examined.

In 28.6 percent of the cases visited, the patients, dissatisfied with the treatment at Gouveneur, had gone to other dispensaries or to private physicians. In 23.5 percent of these cases the patients stated that the private physician found the disease to be different from the diagnosis of the Gouveneur doctors. These alleged wrong diagnoses involved cases of pneumonia, scarlet fever, and diphtheria. Many of these wrong diagnoses involved serious cases which might have terminated fatally if additional medical aid had not been secured.

Many other statistics are resented in this report of a similar character, to the effect that in the majority of cases there was no physical examination before prescribing or when it was made it wasso superficial as to be almost valueless. The results were that most patients received little or no relief from their ailments and there were frequent wrong diagnoses with possible disastrous effects.

The fault for this condition of affairs is partly with the hospital and partly with the attending physicians. The recommendation of the Committee is a complete reorganization.

International Clinics, Vol. II., 24th Series, 1914. Published by the J. B. Lippincott Co., Philadelphia. Price, $10.00 per year. A quarterly of illustrated clinical lectures and original articles, prepared under the editorship of Dr. Henry W. Cattell of Philadelphia.

This quarterly publication has been before the profession so long that it is standard. The present volume contains twenty-three papers, any one of which is deserving of special mention.

The chapter on the Present Status of the Roentgen Rays in the Diagnosis and Treatment of Disease, by Dr. G. E. Pfahler of Philadelphia is particularly pertinent at this time. He first reviews briefly the use of the rays in diagnosis of diseases of the bones, joints and chest. In the diagnosis of gall stones, the rays give positive evidence in at least fifty percent of cases.

By a careful technic, ninety-eight percent of urinary calculi may be demonstrated.

The treatment of diseases of the skin is an especial field for the rays, and the results here are more satisfactory than in any medical treatment.

X-rays are often a valuable treatment in fibroids—in women near the menapause; in carcinoma, they are limited to use after surgical intersection; in sarcoma, the results are much better, probably fifty percent—particularly bone sarcoma—showing recovery.

Each chapter as as good as the one here mentioned. The book is a valuable one.

A book of uncommon interest and value to physicians has just been issued from the press of Parke, Davis & Co. It is a new "Manual of Biological Theurapeutics," receipt of a copy of which is hereby acknowledged by the editor of this journal. The book is handsomely printed in large, clear type, on heavy enameled paper, and bound in cloth. It contains 174

pages of text, upwards of thirty full-page plate in color, and a number of half-tone illustrations in black and white, together with a comprehensive index. As its title suggests, it is a concise and practical treatise on biological therapeutics, and so replete with useful information that no practitioner should miss the opportunity to secure a copy, especially in view of the fact that the publishers announce that the entire edition is to be distributed gratuitously to members of the medical profession. To our physician friends we suggest the propriety of writing at once for a copy of this "Manual of Biological Therapeutics," addressing the request to Parke, Davis & Co., at their home office in Detroit, Michigan. It will not be amiss to mention this journal in writing.

Serology of Nervous and Mental Diseases. By D. M. Kaplan, M. D., Director of Clinical and Research Laboratories of the Neurological Institute, New York City. Octavo of 346 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $3.50 net. W. B. Saunders Company.

This work, the first of its kind published in America, treats admirably the subject of serology of nervous and mental diseases. The wide application of serologic diagnosis in the more or less obscure diseases of the nervous system is being more and more generally appreciated. While much of the work has not gone beyond the experimental stage, the future promises much.

The serology of the negative types (non-luetic diseases) is very instructive, showing that a pleocytosis may occur even without syphilis, and helping to differentiate those that are caused by syphilis. The section on salvarsan is a practical exposition of the subject, giving, besides the ordinary methods as gathered from the literature, also such new methods as have proved of utility in the treatment of nervous diseases due to syphilis. H. J. H.

A Text-Book of the Diseases of the Nose and Throat. By Jonathan Wright, M. D., Director of the Department of the Laboratories, New York Post-Graduate Medical School and Hospital, and Harmon Smith, M. D., Surgeon to Throat Department of the Manhattan Eye, Ear, Nose and Throat Hospital; Clinical Professor of Laryngology and Rhinology, Cornell University Medical School. Octavo, 683 pages, with 313 engravings and 14 plates. Cloth, $5.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1914.

The authors of this book lay especial emphasis on the etiology and pathology of disease. Much of the text matter is the result of original investigations of the authors but the general literature has been freely drawn upon.

The arrangement of the text is logical, the illustrations are ample and clear, the procedures so clear that it proves to be a most valuable book not only for the specialist but for the general practitioner as well.

"Ten Sex Talks to Boys." (10 years and older.) By Irving David Steinhardt, M. D., Instructor in Clinical Surgery, Cornell University, Medical School; with an Introduction by Ernest Thompson Seton. 187 Pages with 12 Illustrations, J. B. Lippincott Co., Publishers, Philadelphia, Pa., 1914.

This book by the author of a similar work "Ten Talks to Girls" is well adapted to carry on the educational campaign in regard to the delicate but most important subject of sex education. The book aims to instruct in readily understood terms. It is a book which physicians and par-

ents may well place in the hands of boys and young men. Sex hygiene, as other forms of hygiene, are essentially matters of education. "To be forewarned is to be forearmed." H. A.

The Practitioner's Visiting List for 1915. Four styles: weekly, monthly, perpetual, sixty-patient. Pocket size; substantially bound in leather with flap, pocket, etc.; $1.25, net. Lea & Febiger, Publishers, Philadelphia and New York.

It affords a simple and complete system for keeping the records of daily practice. In addition to the ruled pages for daily calls and their notes, general memoranda, addresses, cash account, etc., it contains specially arranged spaces for data desired for permanent record such as births, deaths, etc. The value of such records is best appreciated by the physician who has been suddenly confronted by the necessity of producing such data after the lapse of years and in the absence of an orderly system for its preservation.

Manual of Obstretrics. By Edward P. Davis, A. M., M. D., Professor of Obstettrics in the Jefferson Medical College, Philadelphia. 12mo of 463 pages, 171 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $2.25 net. W. B. Saunders Company, Philadelphia, London.

Dr. Davis here presents in concise form the essentials of obstetrics. Whether the physician possesses one of the larger and comprehensive works on obstetrics, he needs a smaller work for ready reference.

Dr. Davis presents the subject under six headings:—Anatomy and Physiology, Pregnancy, Labor, Normal Puerperal Period, Obstetric Surgery, and The Fetus.

The book is complete and a most important addition to the physician's library.

Collected Papers by the Staff of St. Mary's Hospital (Mayo Clinic) for 1913. Octavo of 819 Pages, 335 illustrtions. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $5.50 net.

This book was reviewed in the November Journal, page 400.

SOCIETY NEWS AND NOTES.

The thirty-ninth annual meeting of the **South-Eastern Iowa Medical Society** was held Thursday, November 19, 1914, in the Mt. Pleasant State Hospital, Mt. Pleasant, Iowa.

Scientific program:

President's Address: Operations in the home; when should we operate there, and an analysis of a series of cases, Dr. Coral R. Armentrout, Keokuk.

Pyosalpinx, Dr. J. S. Gaumer, Fairfield.

A case of painless hematuria, Dr. S. A. Spilman, Ottumwa.

Louis Pasteur, Dr. A. O. Williams, Ottumwa.

The general management of hypertension, Dr. Walter L. Bierring, Des Moines.

Difficulties in the differential diagnosis of diseases of the kidney and bladder, Dr. C. H. McGee, Burlington.

Indication for cesarean section, Dr. C. S. James, Centerville.

Shall the surgeon or hospital establish the technic for operations? Dr. J. Fred Clarke, Fairfield.

The relation of the eye to general diseases, Dr. R. M. Lapsley, Keokuk.

The meeting was held in the chapel of the State Hospital and dinner

was served in the adjoining assembly room—an admirable arrangement. The Hospital orchestra played a number of beautiful selections during the dinner hour. Dr. and Mrs. Applegate deserve the thanks of the Association for the splendid care, arrangements and entertainment which they provided.

Notwithstanding the bitter cold of the day, over sixty physicians were in attendance, most of them coming by auto, several driving as far as fifty miles. The program was given entire, every essayist being present.

The usual banquet was held at the Y. M. C. A. at 6 o'clock.

The meeting of 1915 will be held in Washington. The officers elected were Dr. A. O. Williams, of Ottumwa, president; Dr. C. A. Boice of Washington, vice president; Dr. E. F. LaForce of Burlington (re-elected), secretary-treasurer. Drs. J. H. Hull of Washington; J. Fred Clarke of Fairfield and Coral R. Armenttrout of Keokuk were appointed censors.

The **Decatur County Society** met in the parlor of the Lady Amber Inn at Garden Grove, Nov. 5th, at 1:00 p. m.

Program:—Syphilis of the Brain, Dr. Frank A. Ely, Des Moines. A few Histories, Dr. C. L. Belding, Van Wert. Rheumatism of Childhood, Dr. M. L. Turner, Des Moines. Pathological Diagnosis and its relation to Modern Medicine, Dr. B. F. McNeil, Humeston. Hodgkins Disease, Dr. G. H. Sollenbarger, Corydon. Twilight Sleep, Dr. H. R. Layton, Leon. The Conservation of Human Life, Dr. B. L. Eiker, Leon.

Dr. Belding wound up his histories with the following:

"When you find a pneumococcus
Playing on a patient's pipes,
It may smile or jeer or mock us,
And pretend some other types
Of maladies quite simple
And devoid of mystery;
Do not treat it as a pimple
But get a history."

"When some T. B. bug a slumbering
In an alimentary zone
Awakes and goes to wandering
To some neighboring joint or bone
It may baffle you and bluff too
In its feigned sanctity
But it will never get the best of you
When you have a history."

"When a spermat goes a strolling
To court a uterine maid,
And passion's tempest blowing
The rest will be unsaid,
But should you think of Fibroid
Don't forget a pregnancy
And the everlasting signboard,
The important history."

The **Hancock-Winnebago County Society** met at Garner, Iowa, in November, with over 30 physicians in attendance.

Dr. Wescott of Chicago gave a very excellent talk on the diseases of the eye, with which the general practitioner is apt to come in contact and

Dr. Shore of Des Moines read a very interesting paper on Deviations of the Nasal Septum.

The officers for 1915 were elected as follows:

Pres., Dr. A .J. Cole, Britt; sec-'ytreas., Dr. H. F. Thompson, Forest City. Board of Censors, Drs. H. R. Irish of Forest City, Dr. Frazier of Garner, and Dr. Couper of Britt.

Delegate to the State Meeting, Dr. Geo. F. Dalmage, Buffalo Center, Alternate, Dr. Richter, Garner.

Next meeting to be held at Forest City, date to be determined by the President and Secretary and announced later.

It looks as if we had started something.

On November 28, 1914, Dr. Wm. J. Mayo visited Des Moines as guest of the **Des Moines Pathological Society.** The day was spent in visiting the various hospitals and in seeing the city, this being Dr. Mayo's first visit to the city.

Dr. O. J. Fay gave a complimentary luncheon at the Des Moines Club at 1:00 o'clock at which covers were laid for 30.

At 6:30 p. m. the Pathological Society gave a complimentary dinner at the Chamber of Commerce, at which about 200 were seated, there being many visitors from all parts of the state. After the dinner, Dr. Mayo addressed in his inimitable way, the members and guests on The Septic Factor in the Three Great Plagues. With his unusual clearness of statement and sureness of fact, Dr. Mayo related the harm done in Tuberculosis, Syphilis and Cancer by sepsis. A more detailed discussion of this paper will appear in the January issue.

The **Appanoose County Medical Society** met November 25, 1914, Drake Free Public Library, 8:00 p. m., Centerville. General subject, Abdominal Pain and Tenderness.

Interpretation of Pain and Tenderness in the Upper Right Quadrant, Dr. C. S. James.

Interpretation of Pain and Tenderness in the Lower Right Quadrant, Dr. E. E. Bamford.

Interpretation of Pain and Tenderness in the Upper Left Quadrant, Dr. C. P. Tillmont.

Interpretation of Pain and Tenderness in the Lower Left Quadrant, Dr. T. J. Case.

Discussion to be opened by Dr. C. P. Bowen.

Every member was called upon for a three minute discussion.

The **Clayton County Society** met at the Court House in Elkader at 1 p. m., Wednesday, November 18, 1914.

Program:Treatment of Pneumonia, Dr. J. W. Hudek, Garnaville.

Gastric Anacidity, Dr. J. D. Brownson, Monona.

Report of Case of Sclerema Neonatorum, Dr. F. J. Kriebs, Eckport.

Paper, Dr. G. W. Tapper, Monona.

Two new members were voted in.

The **Ringgold County Society** held a meeting on Nov. 18, 1914 at Mt. Ayr. Dr. James R. Guthrie of Dubuque delivered a lecture on Post Operative Intestinal Paresis, and following this he read a paper entitled Intestinal Obstruction.

The following officers were elected for the ensuing year: President, J. H. Goad, Ellston; vice president, L. F. Talley, Diagonal; secretary-treas., Samuel Bailey, Mt. Ayr; censor, three years, Wm. Horne, Mt. Ayr; delegate to state society, C. T. Lesan, Mt. Ayr.

The **Polk County Society's** program for Nov. 24, 1914, was, The Blood Culture as a Means of Diagnosis, Julius S. Weingart, M. D., Intestinal Injuries, Wilbur S. Conking, M. D.

A joint meeting of the **Sac and Calhoun County Societies** was held at Sac City, Nov. 13, 1914, with a good attendance. The program was:

Infections of the Abdomen, Dr. L. J. Townsend, Sioux City, Nervous Indigestion, Dr. Z. Fuller, Sac City.

A banquet at 6:00 p. m. at the Park Hotel formed the social part of the meeting. The meeting was so successful that the Calhoun County physicians extended an invitation for the next meeting to be held in Calhoun County.

The **Monona County Society** held its annual meeting at Onawa, Tuesday, Nov. 17th. Officers were elected for 1915 as follows: Pres. Dr. M. F. Minthorn, Castana; vice president, Dr. B. C. Stewart, Ute; secretary and treasurer, Dr. F S Spearman, Whiting; censor for three year term, Dr. W. W. Gingles, Castana; censor for two year term, Dr. J. A. Thompson, Onawa; delegate to state medical society, Dr. E. C. Junger, Soldier. Drs. M. O. Staunch, of Whiting and J. H Sherlock of Ute were admitted to membership.

At the annual meeting of the **Scott County Society** held at Davenport, Nov. 10, 1914, Dr. Jos. Beck, Chicago, Ill., read a paper entitled, General Infection Arising from the Nose and Throat. Election of officers for 1915 resulted as follows:

Pres., Dr. A .P. Donahoe, Davenport; v. pres., Dr. R. H. Struck, Davenport; sec'y, Dr. Jno. V. Littig, Davenport; treas., Dr. T. W. Kemmerer, Davenport.

The**Wayne County Society** had on Nov .12, 1914, this program:

Insanity, with Special Reference to the Diagnosis and Prognosis of its Common Forms, Tom B. Throckmorton, Des Moines. State Society Protection, Edwin Burchett, Seymour. Malignancy, G. W. Hinkle, Harvard. Pernicious Vomiting with Report of a Case, C. E. Lovlett, Lineville. Paper, R. Z. Ingersoll, Promise City. Tonsil as an Etiological Factor, Con R. Harkin, Osceola.

The 30th Semi-Annual meeting of the **Iowa County Society** was held at Marengo, November 5, 1914. The principal address was, The Borderland of Mental Disease, by Dr. Gershom Hill, Des Moines, Iowa.

The annual election of officers resulted as follows:

Pres., Dr. W. H. Martindale, Marengo; v. pres., Dr. B. Harrington, North English; sec'y-treas., Dr. J. P McManus, Parnell

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Births

Dr. and Mrs. T. C. Denny, of Des Moines, November 16, 1914, a son.

Dr. and Mrs. W. D. Kiely, of Archer, Iowa, November 3, 1914, a daughter.

Dr. and Mrs. F. W. Gessner, of Dysart, Oct. 29, a daughter.

Marriages.

Dr. C. J. Lukens, of Albia, to Mrs. Eleanor A. Wild, at Albia, Iowa October 31, 1914.

Dr. C. W. McQuillan, of Cascade, Iowa, to Mrs. Francis Bradley, at Iowa City, Iowa, October 19, 1914.

Dr. W. W. Pearson and Mrs. Edith King-Ball, both of Des Moines, at Des Moines, November 5th, 1914.

Deaths.

Dr. Jason Roberts, Ohio Medical College, Cincinnati, Ohio, 1865; a resident of Osceola, Iowa, died at his home in that place November 5, 1914. Aged 77.

Dr. Joseph Lewis Powers, College Physician and Surgeon, Keokuk, Iowa, 1876, died at the home of his daughter in Reinbeck, Iowa, October 29, 1914, from Cerebral Hemorrhage. Aged 90.

Dr. James A. Lee, University Iowa College of Medicine, 1873, died at his home in Lisbon, Iowa, October 28, 1914. Aged 66.

Changes of Location.

Dr. E. A. Nash, formerly of McCausland, has removed to Frankville, Iowa, where he has purchased the practice and property of Dr. F. W. Kiesan, who will retire from active practice.

Dr. N. L. Hanson, of the firm, Drs. Gillespie & Hanson, Mapleton, Iowa, has sold his practice to Dr. Gillespie, and will remove to Emerson, Nebraska.

Dr. C. W. Lyons, formerly of Holbrook, Nebraska, succeeds Dr. C. E. Thompson, at Marne.

Dr. D. O. King, formerly of Eldora, has located in Estherville.

Dr. W. H. Pence, formerly of Laurel, succeeds Dr. Chas. F. Cron at State Center, who has bought the practice and property of Dr. Geo. B. Maxwell at Long Grove, where he will practice his profession.

Dr. G. A. Jardine, formerly at Vincent, has removed to New Virginia, where he succeeds Dr. J. P. Maxwell.

Dr. E. R. Young, formerly at Northwood, has located in Dubuque. He will be succeeded at Northwood by Dr. R. B. Yoder, formerly of Cass Lake, Minnesota.

Dr. J. G. Stone, formerly at Roanoke, Virginia, has located at Spirit Lake.

Dr. B. F. McNeil has removed from Humeston to Austin, Minnesota.

Dr. H. D. Chamberlin, located at Nevada for many years, has removed to Los Angeles.

Dr. A. M. Rogers, formerly of Madrid and California, has located in Woodward.

Dr. R. C. Alt is succeeded at La Porte City by Dr. C. A. Manahan, who returns to Iowa after an absence of two years in California.

Dr. E. P. Weih of West Liberty, exects to remove to Clinton soon.

News and Notes.

Dr. A. C. Landis, Brooklyn, Iowa, has sold his office equipment and practice, and retired.

Dr. Rodney Fagan, Police Surgeon of Des Moines, recently sustained a fractured radius while cranking his auto.

Miss Christin Christian is the new superintendent of the Sartori Memorial Hospital of Cedar Rapids.

Dr. C. E. Boyd of Newton, suffered considerable damage by fire to his residence recently.

The Corner Stone of the New Congregational Hospital of Des Moines, was laid November 25, 1914.

Jasper County voters decided against a county hospital at the November election by a majority of 1,593.

Dr. Pierre McDermid of Fontanelle, was elected representative in the Legislature from Adair County at the Nov. election.

Dr. D. C. Steelsmith was returned to the lower house of the legislature by the voters of Osceola County.

The voters of Union Co. decided at the Nov. election to be represented in the lower house of the legislature by Dr. J. W. Coakley of Creston.

Up to and including November 24th, the U. S. Public Health Service reports 196 cases of Rodent Plague at New Orleans, with 30 cases of human plague.

Propaganda For Reform.

Digalen Omitted from N. N. R.—In view of increased extravangance regarding the claims made for Digalen by the Hoffmann-LaRoche Chemical Works the Council on Pharmacy and Chemistry decided to investigate the present eligilibity of Digalen. Examination demonstrated that the asserted presence in Digalen of "amorphous digitoxin" was not sustantiated by evidence, that Digalen and Digalen Tablets were not constant in composition and action and that the claim that Digalen causes less gastric disturbances than digitoxin was unfounded. While the manufacturer promised to hold the claim that Digalen contained "amorphous digitoxin" in abeyance, they refused to concede the variable composition of Digalen and reasserted that Digalen was less liable to cause gastric irritation than other digitalis preparations. In view of the overwhelming evidence that Digalen is variable in action and in composition and that it produces the same gastric disturbances as other digitalis preparations, the Council voted that Digalen and Digalen Tablets be omitted from N.N.R. (Jour. A.M. A., Sept. 5, 1914, p. 881).

Value of Talcum Powders.—The action of talcum powders on the skin depends on their protective and dehydrating properties. On the other hand they tend to form crusts and pastes, due to mixture of the powder with sweat or other secretions. There is doubt if the boric acid in talcum powders can exert any antiseptic action. The action of the salicylated talcum powder of the National Formulary, though containing 10 per cent. of boric acid, depends on its salicylic acid. Commercial talcum powders contain small amounts of various antiseptics and perfuming agents and have little value from a therapeutic point of view (Jour. A.M. A., Sept. 26, 1914, p. 1129).

Angier's Emulsion.—A report of the Council on Pharmacy and Chemistry points out that when Angier's Emulsion, Angier Chemical Co., Boston, Mass., was first put on the market it was advertised as a "food-medicine" and an "Ideal Substitute for Cod Liver Oil". Although the manufacturers now advertise this product as a laxative and state it to be "purely mechanical in its action" they still mingle with the new ones the old claims of "tonic and reconstructive merits" and thus attempt to perpetuate the erroneous belief that the preparation has nutritive vlaue. As to the identity of the petrileum product contained in the preparation, regarding which the advertising circulars make contradictory statements, the A.M.A. Chemical Laboratory reports that this has all the properties of soft yellow petrolatum (Jour. A.M.A., Sept. 12, 1914, p. 962).

Significance of the Word "Lutein".—The word "Lutein" has long been applied in physiologic chemistry to designate a group of fat-coloring matters which occur in nature and which have more recently also been given the general designation of lipochromes. As a rule the use of the term has been restricted to the yellow coloring-matter which develops in the ovarian structures. It is unfortunate that lately various preparations of desiccated corpora lutea from animals are being sold as lutein (Jour. A.M.A., Sept. 29, 1914, p. 1119).

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